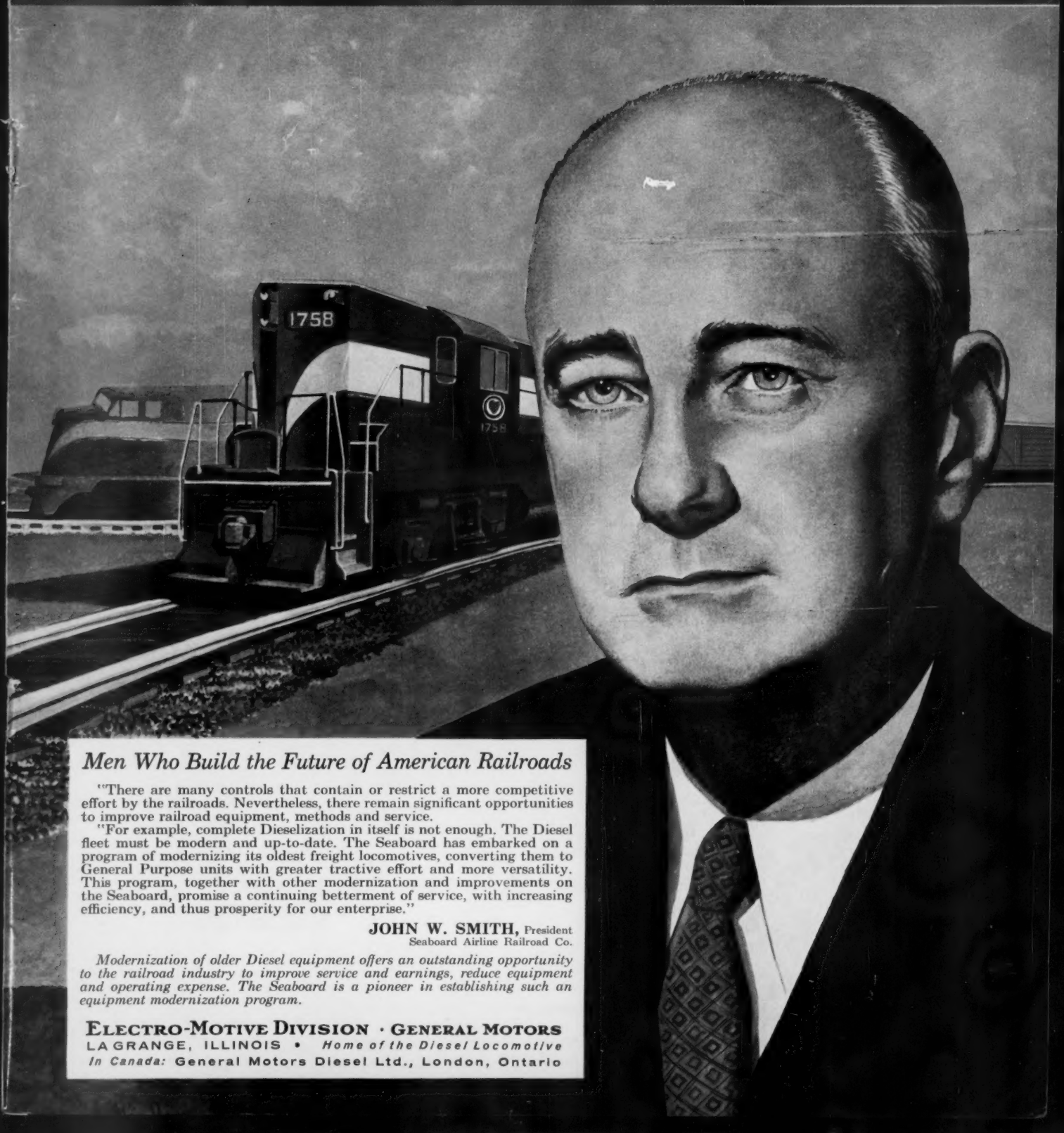
August 26, 1957

Is Piggyback Priced Right?

RAILWAY AGE *weekly*



Men Who Build the Future of American Railroads

"There are many controls that contain or restrict a more competitive effort by the railroads. Nevertheless, there remain significant opportunities to improve railroad equipment, methods and service.

"For example, complete Dieselization in itself is not enough. The Diesel fleet must be modern and up-to-date. The Seaboard has embarked on a program of modernizing its oldest freight locomotives, converting them to General Purpose units with greater tractive effort and more versatility. This program, together with other modernization and improvements on the Seaboard, promise a continuing betterment of service, with increasing efficiency, and thus prosperity for our enterprise."

JOHN W. SMITH, President
Seaboard Airline Railroad Co.

Modernization of older Diesel equipment offers an outstanding opportunity to the railroad industry to improve service and earnings, reduce equipment and operating expense. The Seaboard is a pioneer in establishing such an equipment modernization program.

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Leader in the Maintenance Field!

Kershaw machines pictured on this page are at work today on railroads throughout the world helping solve a multitude of track maintenance problems . . . Whether it be individual performance or work in various maintenance packages, the Kershaw line of trackwork equipment, proven on the job, truly is first in the railway maintenance field.

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BALLAST CLEANER

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Now ... more than ever ...
Recognize This Symbol of Leadership ...

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The Miner Class A-22-XL Friction Draft Gear and Miner Class RF-333 Rubber-Friction Draft Gear fulfill every requirement for efficient performance in freight train operation. Both draft gears retain their high capacity with low sill pressures during many years of service. The gears were certified under the friction draft gear Specification No. M-901 and are approved for unlimited application to cars in interchange.

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HOTEL SHERMAN • ALLIED RAILWAY SUPPLY ASSOCIATION
SEPTEMBER 15, 16, 17 and 18, 1957

W. H. MINER, INC. CHICAGO

The Bladensburg Road Bridge in Washington, D. C. (above), is one of the many Pennsylvania Railroad bridges ballasted with corrosion resistant wrought iron.

Pennsy engineers use Wrought Iron deck plates to combat corrosion — permit shallow floor depth design

The Pennsylvania Railroad is increasing the life span of a good many of their bridges — throughout their system — with wrought iron deck plates.

The Pennsy's selection of wrought iron plates for this service is sound engineering, for a number of reasons. Plates are subject to vibration and severe corrosive attack from coal and refrigerator car drippings and run-off water. The use of ballast makes it difficult for regular maintenance. And there's a lot of welding involved in fabrication.

There's one material available with the stamina to take on all these factors. Rugged wrought iron. Wrought iron's unique composition makes it extremely corrosion resistant; helps it withstand terrific fatigue stresses; gives it self-fluxing properties which produce sound welds.

Ballasted bridge structures with all metal decks have definite advantages. Installations of this type permit reducing floor depth to a minimum. And they're more economical than concrete. Write our Engineering Service Department if you have a problem, and ask for our booklet: *Wrought Iron for Railroads*. A. M. Byers Company, Clark Building, Pittsburgh 22, Pennsylvania.

BYERS Wrought Iron Tubular and Hot Rolled Products

Corrosion costs you more than Wrought Iron

RAILWAY AGE *weekly* August 26, 1957 • Vol. 143, No. 9

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Plastics shine in passenger roles ..... p. 9

Light, tough, easy to clean, colorful materials keep passenger car construction costs within range railroads can pay. Structural possibilities are shaping up, too.

Analyst sees railroad outlook bleak p.10

He advises investors to sell rail stocks "on the rise" generated by freight rate boost.

Unity and hard work shape the rail future p.13

Reading President Fisher says the industry can match strides with the national growth, but not without a struggle.

Piggyback isn't priced right p.16

From Transportation Consultant Ernest C. Poole: A shrewd analysis of piggyback economics. If you don't appraise and control TOFC costs and rates, use of this potent transport device can be disastrous.

'Catering service' for PRR diesels p.21

At Chicago, they "bring the mountain to Mohammed"—trucking sand and lube and fuel oil to switch engines out on the job.

This man's travel dollar works two ways p.23

Car-rental leaders see a need for more forceful promotion of rail-auto travel. Big target: The business man "on the road."

Aluminum for center sills okayed p.37

Big departure on 30 new aluminum hoppers in Roberval & Saguenay fleet is reported to meet all AAR strength requirements.

Dumper gives export coal a 'cushion ride' p.38

Fast, but oh! so gently! New $3.5 million coal dumper on C&O Newport News coal pier puts a damper on cascading coal and holds breakage to a minimum.

LIRR blends paint and public relations p.41

Goodwill-conscious Thomas M. Goodfellow is winning new friends with an inexpensive gambit that lets the commuter pick his own station colors.

How earthquakes report themselves p.46

"All shook up" by recurring earth tremors—though no damage has been done recently—the Southern Pacific has developed a method of quake detection so it can speed repair crews to trouble spots if it ever has to.

The Action Page—Railroads' merits need selling **p.58**

Somehow the railroads' position as the only true common carriers has never been brought home to the public. Needed: Encouragement for the roads' talented public relations people to dramatize the industry's "salable" qualities.

Short and Significant

Ex Parte 206 freight rate increases . . .

were cleared last week to become effective as scheduled August 26. The ICC's Division 2 voted not to suspend any of the tariffs involved. The division's action came after consideration of several protests, some of which sought to have the case reconsidered, while others wanted to set back the effective date of the increase.

Short gets western road labor assignment . . .

Theodore Short, chief personnel officer of the Missouri Pacific, has been appointed chairman of the Western Carriers Conference Committee which represents western roads in national and regional labor negotiations. The position had been held by Daniel P. Loomis while he served as chairman of the Association of Western Railways before taking over as president of the AAR August 1.

New job for 'Aerotrain'? . . .

General Motors' "Aerotrain", returned by the Pennsylvania June 30 and now undergoing refurbishing at LaGrange, may go into service again in September. Two roads have expressed interest in the experimental lightweight.

Trainmen may get AFL-CIO charter . . .

The AFL-CIO executive council has authorized President George Meany to issue a charter to the Brotherhood of Railroad Trainmen. Mr. Meany, however, is expected to confer first with other unions on a jurisdictional issue and on a so-called "racial" clause in the BRT constitution.

Economic research teams . . .

to determine, as one traffic man puts it, "where we've missed the boat," are being developed for Transcontinental, Southwestern and Western Trunk Line territories. Railroads and motor carriers will supply traffic talent; current quest is for Ph.D.'s to head up the committees.

Increased steel prices . . .

drove the AAR price index for July up to 154.1, a rise of 2.4 points above April's 151.7. The index for iron and steel products was up 6.1 points, from 177.4 to 183.5. Other component indexes were down slightly or remained virtually unchanged. The index reflects changes in spot prices of materials and supplies, including fuel, on the basis of averages of June 1947 and 1948, and July 1949.

Week at a Glance CONT.

Current Statistics

Operating revenues, six months	
1957	$5,233,825,887
1956	5,236,344,953
Operating expenses, six months	
1957	$4,110,382,398
1956	4,037,305,569
Taxes, six months	
1957	$541,759,233
1956	558,823,136
Net railway operating income, six months	
1957	$450,303,531
1956	511,593,738
Net income estimated, six months	
1957	$345,000,000
1956	404,000,000
Average price 20 railroad stocks	
August 20, 1957	88.46
August 21, 1956	99.24
Carloadings revenue freight	
Thirty-two weeks, 1957	22,029,783
Thirty-two weeks, 1956	22,701,123
Average daily freight car surplus	
Wk. ended Aug. 17, 1957	12,396
Wk. ended Aug. 18, 1956	5,849
Average daily freight car shortage	
Wk. ended Aug. 17, 1957	3,171
Wk. ended Aug. 18, 1956	7,728
Freight cars on order	
August 1, 1957	85,229
August 1, 1956	126,194
Freight cars delivered	
Seven months, 1957	59,136
Seven months, 1956	38,533

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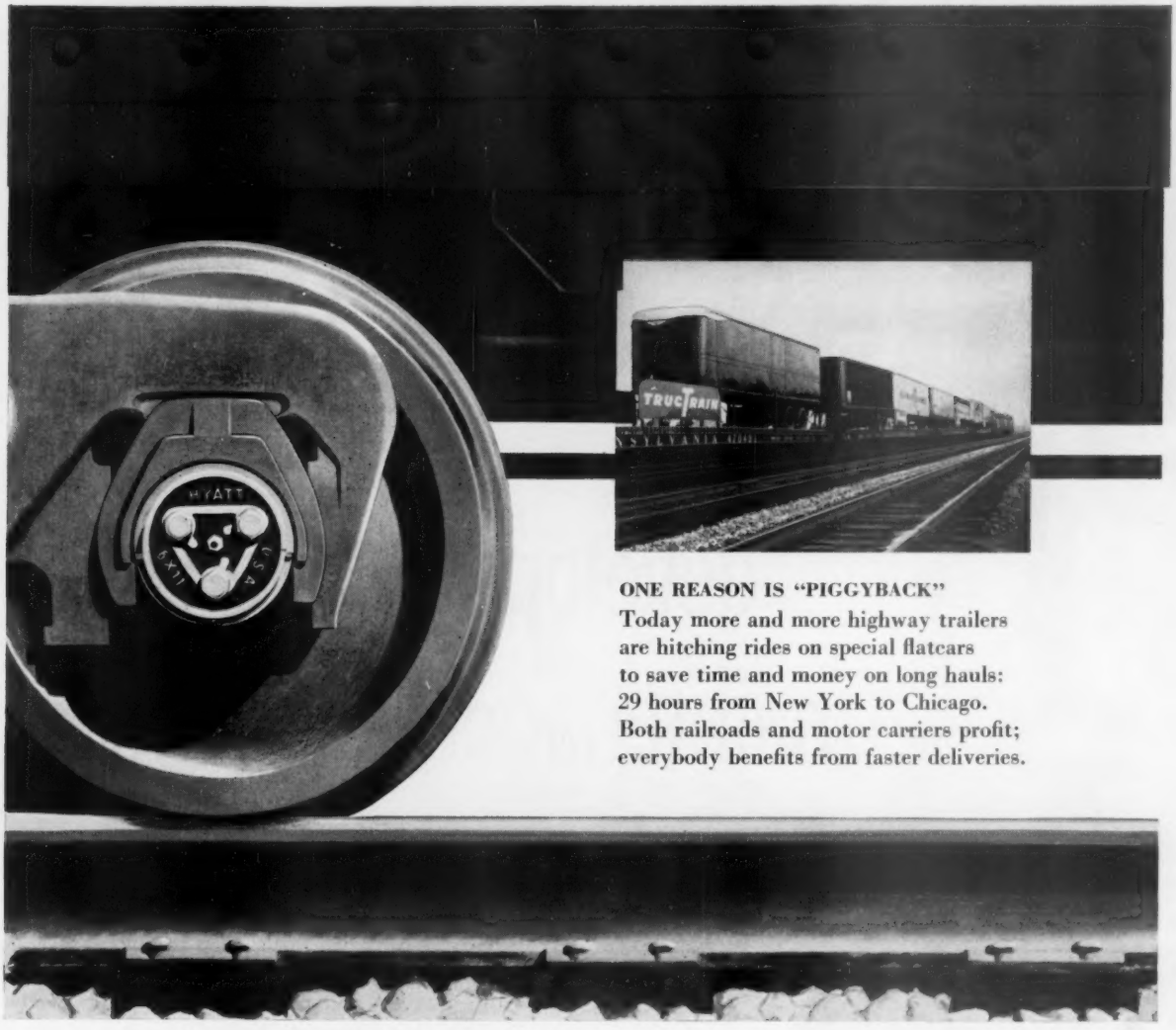
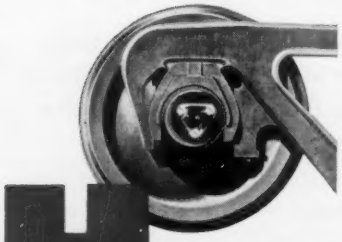
Why rail freight is going great!



ONE REASON IS "PIGGYBACK"
Today more and more highway trailers are hitching rides on special flatcars to save time and money on long hauls: 29 hours from New York to Chicago. Both railroads and motor carriers profit; everybody benefits from faster deliveries.

Another GM contribution to railroad progress

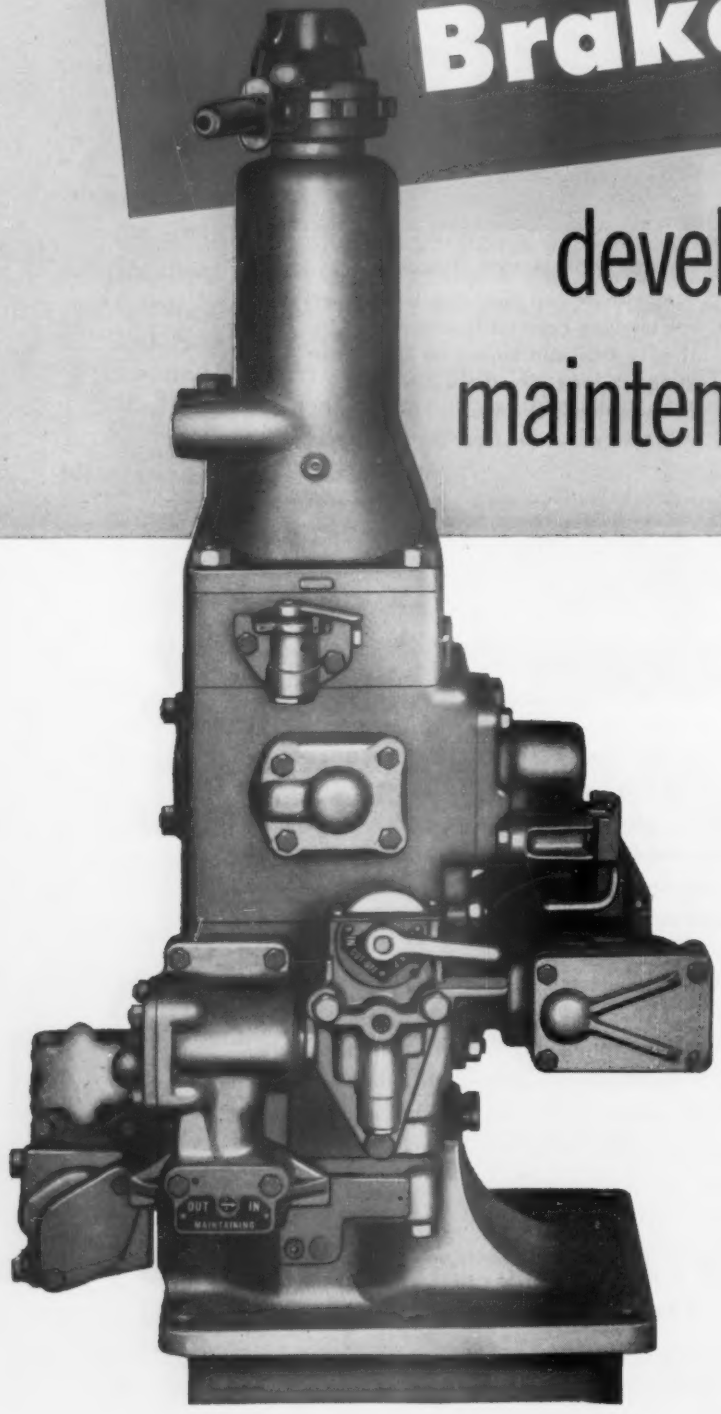


ONE MORE BIG REASON IS HYATT HY-ROLL BEARINGS for non-stop freight. It's significant that so many of the new flatcars built for high-speed "piggyback" service have HYATTS . . . because railroads recognize roller bearings are the answer where delay-free dependability counts! HYATT Hy-Rolls banish hotboxes, major cause of freight train delays. Their sealed-in 3-year grease supply saves time-wasting waits for inspection and lubrication, too. And new HYATT Hy-Rolls are so simple to install and maintain that they make the big switch to roller bearings practical at last. They're playing a bigger and bigger part in the railroads' modernization program to bring America *better and better freight service!* Hyatt Bearings Division of General Motors Corporation, Harrison, New Jersey.

HYATT HY-ROLL BEARINGS
FOR NON-STOP FREIGHT

DS-24-M Brake Valve

develops outstanding maintenance economies



THE Brake Pipe Pressure Maintaining Feature provides more uniform distribution of braking throughout the train. It develops these outstanding maintenance economies—

1. Less rigging maintenance and fewer damaged brake heads.
2. More uniform brake shoe wear.
3. Reduced wheel damage from overheating at front end of train.

These economies can be realized on 24-RL Brake Valves now in service by substituting a Conversion Filling Piece for the existing filling piece.

Write for our Circular Notice No. 1130 which gives complete details.

Westinghouse Air Brake COMPANY

AIR BRAKE DIVISION WILMERDING, PENNA.

RAILWAY AGE
The Industry's Newsweekly

Plastics Shine in Passenger Roles

Reduced construction costs stand out among advantages offered by growing variety of available products.

Acrylic-melamine-phenolic-nylon-polyester-urea-vinyl-fluorocarbon-cellulosics.

Peculiar terms in the earthy jargon of railroading. Hard to say; hard to keep straight; hard to beat, too, railroad men have found out.

In virtually all phases of railroading, perhaps most noticeably in passenger car construction and decoration, these strange, some-new, some-old, terms are becoming as common as coal, as familiar as creosoted ties. In a word, they're *plastics*.

One expert in the use of these materials—they are the basic generic elements of a whole host of materials marketed by numerous manufacturers under various trade names—says that plastics have "a terrific gamut of possibilities" in railroad applications.

It's claimed that you can get a plastic of one form or another for almost any purpose: to withstand heat, fluorocarbons; for flexibility, vinyl; to resist scratching, phenolic; for large products, polyesters; for effective use of colors, melamine; to bear up under extreme cold, acrylic.

And many of these plastics have one or several of the qualities of the others.

Manufacturers find it cheaper to construct the dies needed for shaping plastic products than to build the counterparts for steel or even aluminum fabrication.

Economy, now that the construction of plastic products is being perfected and the trial-and-error period of a relatively new working ingredient has pretty well passed, is a vital factor in the growth of plastics in industrial usage.

The cost of a railroad passenger car has risen considerably in recent years in keeping with the general rising cost of doing business—but according to Walter Dean of the Product Research Division, the Budd Company, the railroads could not have afforded to buy the modern cars that have been built recently had they not turned from metal interiors to plastics.

There have been significant weight reductions made possible through the use of plastic materials, Mr. Dean notes—musing that there are "extremely interesting weight-saving potentials"—but cost reduction is the big thing.

Price trimming possibilities are dramatized in Budd's "Pioneer III" experimental car built for the Pennsylvania. Laminated, fiberglass-reinforced plastic permitted one-piece construction of the washroom frame, the stair-wells and battery box as well as the formed side and overhead paneling.

In building the "Roger Williams" for the New Haven, Budd also made extensive use of plastics, substituting a vinyl material in side panels for melamine. Its choice was based on its naturally warmer, softer feeling—it's less marble-like.

Next to the initial cost-reduction, probably the next most impressive feature of plastics in railroad passenger car use is their easy-maintenance qualities.

A. M. Proctor, design specialist with American Car & Foundry, says that the railroads have probably bought their last painted-interior passenger car. Use of paint would not alter the initial cost of a passenger car compared to a plastic interior, he notes, but the ease of cleaning and the permanence of the finish change this picture entirely.

Mr. Proctor is enthusiastic about the possibilities of achieving increasingly attractive car interiors with plastics. Pigmentation is constantly being improved with fading tendencies virtually eliminated, he says.

What plastic to use is decided by where it is to be used, he says, pointing to the stiff plastic seat backs on the New Haven Talgo-type train chosen to resist scuffing and for its easy-cleaning quality. Also determining the choice is the need to mold the plastic into corners and around projections in the car. Again, too, how much the railroad wants to pay is a governing factor.

Plastic tiling for floors is not new; nylon rugs can be expected to replace wool; seat fabrics and curtains in plastic materials are increasingly popular; there are many out-of-sight applications in air and heat ducts, brake bushings, electrical, weather and sound insulation, with potential use in steam and air lines. Budd is thinking of "throw-away upholstery" for use on its molded one-piece coach seats.

Pullman-Standard claims the first use of plastics in railroad cars—in the early thirties. At first, this use was confined to molded window cappings, table tops and decorative features, but in the mid-thirties, according to T. C. Gray, vice-president, engineering, an "all-synthetic" "passenger-proof" lounge car was built experimentally.

"It seems reasonable to predict," Mr. Gray states, "that the next 10 years will see rapidly expanded use of plastics as two major design problems have become increasingly important in our new passenger car concepts—light weight and low operating and maintenance costs."

Mr. Gray's crystal ball tells him these developments are in the offing:

- Molded plastic furniture and structural framing members;
- Insulation with foam plastics in

EASY TO INSTALL are plastic panels such as these forming interior sidelinings and ceiling of "Pioneer III" built by Budd for Pennsylvania.

HOUSEKEEPER'S DREAM is answered in scuff-resistant, easy-to-clean paneling and seat backs in Pullman-Standard "Xplorer" on New York Central.

BRIGHT APPEARANCE is a standout feature in virtually all-plastic interior of Kansas City Southern chair car built by American Car & Foundry.

sides, roofs, bulkheads as well as underframes;

- Clear plastics for windows, mirrors, light diffusers;
- Complete obsolescence of painted interiors;
- Plastic for water, refrigerant and electrical conduit tubing;
- Plastic washstands, hoppers, berths and basket racks;
- Cushioning plastics, now in seats, for mattresses;
- Disposable plastic table and flat wear.

How about an all-plastic car—outside as well as in?

From the underframe up it's viewed as a real possibility by Mr. Proctor and others with rapidly developing extrusion processes. Some plastics, he notes, are stronger than steel but one big obstacle is a lack of forms large enough to shape the car. A possibility: extrusion of several parts to be united somehow into a whole car.

One big handicap: research and development is costly; car builders don't get the money from passenger car construction that they once did; who's to pay for experimentation?

FROM WALL STREET—A PESSIMISTIC REPORT

Analyst Sees RR Outlook Bleak

Because "fundamentals are working against the rails," a well-regarded financial expert has advised investors that "a constructive long term view toward railroad stock appears untenable."

Walter F. Hahn, analyst with Smith, Barney & Co., contends that "as an industry, the railroads are not coping very successfully with inflation. Only a few of the very best in terms of management and natural advantages have been making earnings progress.

"Therefore, investment in railroad stocks should be limited to a relatively few companies that have demonstrated unusual ability in translating gross revenues into net income."

His remarks were included in a railroad bulletin issued prior to ICC action in the Ex Parte 206 freight rate increase case.

However, questioned at New York last week, Mr. Hahn said his views are unchanged in light of the authorized higher rates. "Even if the increase had been 10% across the board," instead of the average boost of 5% or less, he declared, he would not recommend investment in railroad stocks on a long term basis.

He recalled a portion of his pre-rate hike bulletin in which he had said there is "reason for temporary bullishness, especially for the speculator interested in short term profits." The railroad stock picture probably was brightened by the ICC action, he commented, but added that his advice still would be to "sell them on the rise" before adverse sentiment sets in again.

The rate case itself constitutes a flaw in the railroad position, he argued, with the comment that "DeButts is right" (Southern President H. A. DeButts) in his opposition to general rate boosts.

Mr. Hahn had stated in his bulletin that "there is no good evidence that railroad competitors are not continuing to take traffic away from the rails. . . . Additional freight rate increases may aggravate the erosion."

Behind Mr. Hahn's pessimism is his impression that the railroads have failed to increase their revenue per ton mile enough to reflect a cumulative total of 107.7% in freight rate increases since mid-1946. Rising wages, material costs and taxes, coupled with overstated earnings and "depreciation charges . . . woefully low in relation to capital requirements" are factors to blame, he said. With more pay rises in sight (at a cost of $25 million a year per penny more) Mr. Hahn stated, "the broad outlook for the rails . . . cannot be realistically viewed as very satisfactory." He warned that unless the latest rate hikes get better reflection in ton mile revenues, the increases would have only the temporary effect of tiding the roads over to 1958.

Western Roads Settle For 7¼% Mail-Pay Hike

Western railroads have agreed to settle their mail-pay case for an increase of 7¼% over present rates. The increase would be retroactive to July 1, and would add about $9 million a year to the mail pay of the western lines, bringing it to a total of about $134 million a year.

This was announced recently by Postmaster General Summerfield, who pointed out that the settlement must be approved by the Interstate Commerce Commission which has before it the western case as well as like cases involving applications of eastern and southern roads.

The increases sought in the latter two cases, the postmaster general said, would amount to 63.84% and 64.59%, respectively. The petition of the western roads *(Continued on page 13)*

Edgewater quality

"measures up"

Every step in the manufacture of Edgewater Rolled Steel Wheels—from the making of steel to final inspection—is conducted in our own plant. As a consequence, we are able to maintain close control throughout every phase of the operation. This careful supervision assures optimum properties in the finished wheels. And that is why Edgewater Wheels "measure up" to your most-exacting requirements.

GEARED TO PROGRESS
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MEMBER

Edgewater Steel Company

P. O. BOX 478, PITTSBURGH 30, PENNA.

ENGINEER'S FIELD REPORT

PRODUCT CHEVRON FILTER COAT

FIRM FARR COMPANY
Los Angeles, Calif

Air filter firm uses Chevron coating exclusively

Farr Co. supplies impingement-type air filters, oiled with Chevron Filter Coat, to nearly all major railroads. A leader in air filtering, Farr has used Chevron Filter Coat (formerly Calol) exclusively for three years, since product was introduced.

Farr's Director of Research, S.F. Duncan, recommends gel-structure oils like Chevron Filter Coat because they improve filter efficiency. Other users report Chevron Filter Coat increases filtering efficiency as much as 50% over oils they previously used.

A heated centrifugal oiler of their own design (above) applies Chevron Filter Coat to all Far-Air filters just before they are packed for shipment. Filters are immersed in heated oil for 30 seconds, then raised and spun at 300 rpm for a minute to remove excess oil.

Why Chevron Filter Coat ups efficiency of air filters

- High wicking ability—quickly soaks dust particles
- Will not drip off screens—gives full filtering efficiency through entire service period
- Easily applied and cleaned—but will not wash off in service
- Does not separate, harden, or change properties in service
- Non-corrosive to metals

CHEVRON Industrial Lubricants

For More Information about this or other petroleum products, or the name of your nearest distributor, write or call any of the companies listed below.

TRADEMARK "CHEVRON" AND "CHEVRON" DESIGN REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey
STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA COMPANY, Denver 1, Colorado

asked the ICC to investigate their mail-pay situation with a view to raising the rates to a "reasonable" level.

Aside from the rate increase, the settlement contemplates changes in ICC rules computing the method of payment. Rules now require the Post Office Department to provide the railroads, in advance, with monthly statements of its requirements, and to pay for all space reserved whether actually used or not. This system has not been in effect on western roads since 1955, because of special contracts negotiated by the department to pay only for space used. The settlement provides for an amendment to the ICC rules so that a new rate order will reflect these arrangements.

Bills on Safety Acts, Revamps, Contract Trucks Become Law

President Eisenhower has signed into law three bills which Congress recently passed in response to legislative recommendations made by the Interstate Commerce Commission in its latest annual report.

They are S.1492, which increases penalties for carrier violations of safety laws; H.R.3775, which amends Interstate Commerce Act provisions (Section 20b) relating to voluntary financial reorganizations of railroads; and S.943, which requires contract truckers to file their actual (instead of minimum) rates with the commission.

The new provisions relating to rail safety increase penalties under the Safety Appliance Act from $100 to $250 for each violation. The minimum fine for each violation of the Hours of Service Act will be increased from $100 to $200, with the maximum remaining at $500.

The fine for each violation of the Locomotive Inspection Act is increased from $100 to $250. The new law also increases fines called for under the IC Act's Section 222 for motor carrier violations of safety regulations, and for unlawful practices such as rebating.

The Section 20b amendment adds provisions under which controlled or controlling stockholders of a railroad undergoing voluntary reorganization may be permitted to vote on the revamp plan. It also modifies provisions relating to solicitation of assents to reorganization plans.

Enactment of the three measures raised to five the number of favorable actions taken by Congress this year on the commission's legislative recommendations. The other two amended the Fourth Section, and expanded the Medals of Honor Act to provide awards for heroism on highways (Railway Age, July 15, p. 48).

ICC Proposes Safety Rules for Track Cars

The Interstate Commerce Commission is proposing to extend the scope of its safety rules to give effect to the Supreme Court's decision that a track motor car and push truck coupled together are vehicles covered by the Safety Appliance Acts.

The court so ruled last May in a 5-to-4 decision in *Baltimore & Ohio v. Jackson* (Railway Age, May 27, p. 14). The commission's proposal came in a notice of proposed rule making issued under the Administrative Procedures Act.

The notice gave interested parties until November 1 to file statements of their views with the commission's secretary. They may request oral argument.

TOFC Enters Fray Against 'Common Cold'

First coast-to-coast piggyback shipment of drugs has been completed by four participating roads through St. Louis Gateway. Shipment, shown being loaded aboard Lackawanna trailer, left CIBA Pharmaceutical Products Co. at Summit, N.J., August 7 for arrival at Millbrae, Cal., August 15. Drugs — 35,000 pounds of "Privine" to combat expected autumn outbreak of sniffles and sneezes — moved DL&W-Nickel Plate-Cotton-Belt-Southern Pacific. Drug firm announced it has found TOFC an asset to business because of "high speed, damage-free qualities."

Unity, Work Shape RR Future: Fisher

Railroading is no "dying industry" Reading President Joseph A. Fisher told a labor audience August 21. With teamwork from all segments of the industry, he declared, the railroads can fully keep pace with the growth of the nation.

"We can do it," he maintained, "by harder selling, by increasing our efficiency and improving our service, and by fighting for more equitable legislation governing regulation in transportation."

Two things are sure, Mr. Fisher told a Brotherhood of Railroad Trainmen lodge meeting at Hyde Park, Pa. "One is that the population of the United States will continue to grow . . . and with it, productive capacity will expand to meet the future needs of our nation. This in turn means that there will be an ever increasing amount of freight moving between our cities.

"Because railroads are able to provide the most efficient and economical transportation service . . . it would follow that their prospects for the future are good."

He warned, though, that if the railroads are to share in the country's expanding transport needs, they will "have to earn it and fight for it. . . . The future of our business depends on teamwork by every single member of our railroad family."

Among the Reading's own efforts, Mr. Fisher added, has been investment "to the limits of its financial ability in new equipment, improved roadway and the countless new devices being produced."

B-L-H Heralds 'Bouncy' New Engine

An advanced design free piston engine with promising potential for locomotive application has been announced by the Hamilton Division of Baldwin-Lima-Hamilton.

Free piston engines—the pistons are not restricted by connecting rod linkage and are left free to "bounce" in the cylinders —deliver their output to gas turbines for conversion to mechanical power.

B-L-H said that a continuing program of research and development had produced two types of free piston "gasifiers." One is a single-stage design, model "DL," the other a two-stage, turbocharged design, model "FP-165." B-L-H says they have a power output potential of 125 shaft hp when used singly and up to 1,000 hp when used in multiple.

Advantages offered in the design, B-L-H reports, include direct reversibility (with reverse power up to 60% of for-

ward power rating); servicing while the turbine is running; easy handling because of their light weight; and virtually vibrationless operation.

Gasifiers surpass diesel engines, B-L-H says, in these respects, greater power-to-weight ratio; wide range of fuel; usefulness in combination with one turbine to provide a wide range of power outputs; high-starting torque, controlled variable speed and reversibility without more bulky and costly transmissions and torque converters; and lower service and maintenance costs.

The FP-165 is also held to surpass the open-cycle gas turbine, long rated the most desirable substitute for the diesel in most applications, in these respects: 50% or better fuel savings; faster deceleration; operation at lower temperatures (1,000 deg) permitting use of standard steels; faster high-torque characteristics; "stackability" for greater horsepower output.

In addition to Baldwin, it is known that Electro-Motive is working on a 2,000 hp free piston gas turbine electric locomotive.

Freight Rates Up 107% in 11 Years

The Ex Parte 206 freight-rate increase, which becomes effective this week, is a 4.8% advance, and brings increases made since June 30, 1946, to a cumulative total of 107.7%.

This was reported by the ICC's Bureau of Transport Economics and Statistics in its "Transport Economics." The bureau listed the various increases in the accompanying table.

Other figures indicated that the 4.8% over-all increase, authorized by the commission in its August 6 decision (Railway Age, Aug. 12, p. 9; Aug. 19, p. 10), will amount to 4.9% in the Eastern District, 2.3% in the Pocahontas Region, 3.5% in the Southern Region, and 5.5% in the Western District.

Effective date of increases	Docket No.	% Increase Over Rates in effect June 30, '46 cumulated	% Increase Over Rates just prior to increase shown
July 1, '46	Ex P. 148 Ex P. 162	6.5	6.5
Jan. 1, '47	Ex P. 148 Ex P. 162	17.6	10.4
Oct. 13, '47	Ex P. 166	28.1	8.9
Jan. 5, '48	Ex P. 166	37.8	7.6
May 6, '48	Ex P. 166	42.8	3.6
Aug. 21, '48	Ex P. 166	44.2	1.0
Jan. 11, '49	Ex P. 168	51.7	5.2
Sept. 1, '49	Ex P. 168	57.3	3.7
Apr. 4, '51	Ex P. 175	61.1	2.4
Aug. 28, '51	Ex P. 175	67.6	4.0
May 2, '52	Ex P. 175	78.9	6.8
Mar. 7, '56	Ex P. 196	88.8	5.5
Dec. 28, '56 Feb. 23, '57	Ex P. 206 Ex P. 206	98.2	5.0
Aug. 26, '57	Ex P. 206	107.7	4.8

Progress on the Muddlety

Stroud's Creek & M Muddles Ever Onward

The Stroud's Creek & Muddlety has done it again. It's added another "first" to its ever-growing list of signal accomplishments in railroad progress.

The old "Sweet, Cool & Mellow" (as we like to think of it) announced somewhat breathlessly last week that it is now 100% dieselized.

That makes it the first road by that name serving Allingdale, Tioga, Ticoal, Muddlety and Ravens (all in West Virginia) that has irrevocably parted with the past by snuffing out the boilers of its steam locomotive fleet.

In the words of the irrepressible public relations department of the road "linking Muddlety with the world": the SC&M "is now completely dieselized, and the smoke problem has been eliminated throughout the area served by the railroad. Not many people ever complained about the smoke problem, but it existed just the same. Used to smudge up the foliage along the right-of-way something fierce.

"The three new diesel locomotives which replaced the SC&M's proud fleet of four steamers are not as awe-inspiring as steam locomotives, and this department could get pretty nostalgic just thinking about the great old days, but it will not. Dieselization spells progress and the SC&M is nothing if not progressive."

Fork Up & Deliver

In front of State Capitol at Lansing, Mich., Fred F. Costello, chairman of Detroit Railroad Community Committee, leans out of mock-up train to deliver $3,365,000 semi-annual tax payment of eight Detroit area roads to Tax Commissioner L. J. Nims. Committee reports annual railroad tax of over $8 million to state primary school fund pays for education of 211,500 Michigan children each year.

Liqnite Tested In Dunkirk Turbine

A test charge of lignite is being burned in an extension of the original, 1,000-hr coal-fired, gas-turbine test at the Locomotive Development Committee laboratory at Dunkirk, N.Y.

The new series of tests, according to P. R. Broadley, LDC Director of Research, is being run for the Wyodak Resources Development Corp. of Gillette, Wyo. Several carloads of Wyoming lignite are being burned. The lignite is a high moisture fuel (30 per cent) of a type reportedly found in large quantities along the lines of the Burlington and the Great Northern. The immediate problem is to determine the feasibility of using this fuel to generate electric power with a gas turbine in arid regions where water for condensers is scarce.

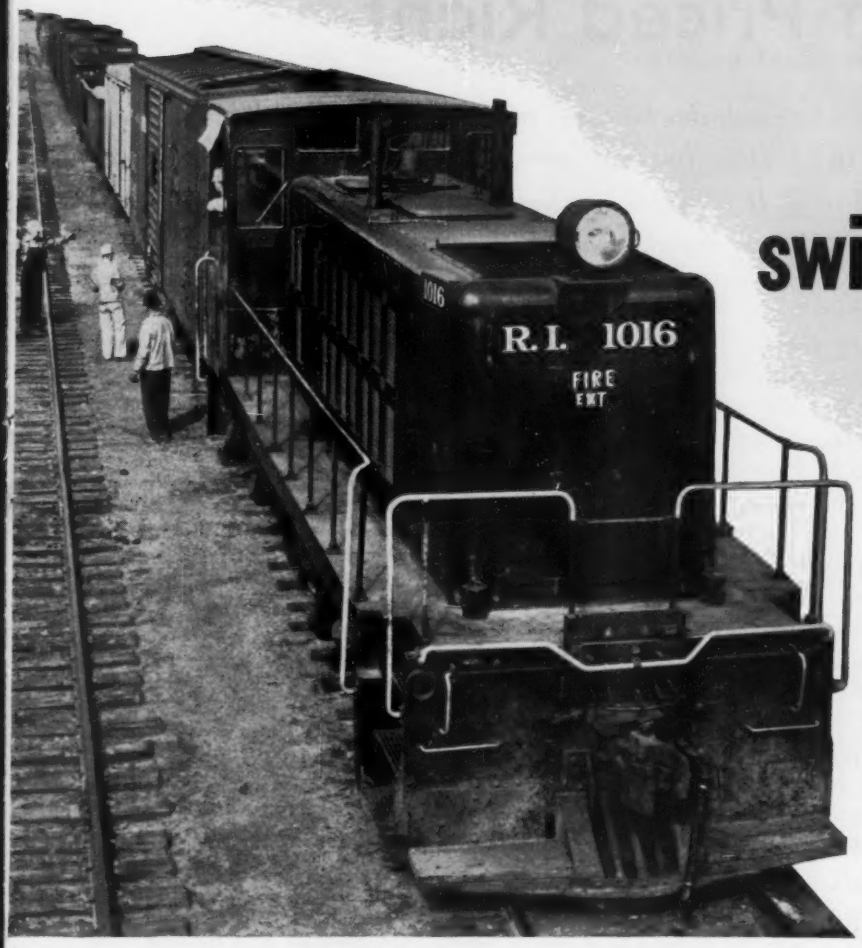
Following the lignite tests, the turbine will be torn down for inspection of all components. This was previously planned for completion of the 1,000-hr "final commercial acceptability test" during which Pocahontas and Pittsburgh seam bituminous coals were burned.

Three Railroads Granted NSC's 'Award of Honor'

Three railroads have been granted the National Safety Council's Award of Honor for their achievements in bettering their safety records during 1956. NSC's highest award went to the Union Pacific, Santa Fe and Chicago & Western Indiana.

Entrants in the safety contest compete only against their own past records. The award is given in recognition of general excellence in improvement of record and excellence in industry generally.

Power: CAT* Railroad Diesel



Rock Island switcher handles loads up to 3,385 tons

The Rock Island operates a number of Whitcomb 75-ton switchers in its yards. And all these diesel-electric units are powered by powerful Cat D397 Engines.

Each of these switchers handles trailing loads up to 3,385 tons on level track with a continuous tractive effort of 22,000 pounds at 6 MPH and has a maximum speed of 48 MPH.

This production record comes at low cost, because of the proven high availability record of Caterpillar Railroad Diesels. Many of these engines have operated for thousands of hours without repairs. *All* are designed for the hard work.

You cut costs other ways, too. Every Caterpillar Diesel operates on inexpensive No. 2 furnace oil as well as the more expensive fuels—without fouling. And because your Caterpillar Dealer stocks your parts, you do not have to tie up railroad funds in parts inventory.

By standardizing on Caterpillar Railroad Diesels, you can pyramid your savings. The many models of these engines make it possible for you to find the exact diesel for your needs. They come in 9 sizes up to 650 HP (maximum output capacity) and there are electric sets up to 350 KW.

When you order new equipment or repower old equipment, see your Caterpillar Dealer. He will give you specifications and data to help you plan the exact diesel power for *your* job. Then specify high-production Caterpillar Railroad Diesels.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

A QUARTER CENTURY OF DIESEL LEADERSHIP

Piggyback Isn't Priced Right

Moving trailers by "piggyback" has a much wider field of economic usefulness than the present rate structure, and available cost information, have assigned to it. It is by far the most economical method of handling a sizable proportion of freight traffic.

By E. C. Poole

EVERY TOOL of transportation, including the lowly wheelbarrow, has a field of economic usefulness—certain transportation jobs where a particular tool can perform the work more cheaply than any other tool. The trouble is—the most economical tool will not be chosen for the jobs it can do best, unless charges for the use of each tool accurately reflect the relative costs of using it.

The internal combustion engine has completely revolutionized transportation—and yet yesterday's simpler tools still have a place where they are the more economical. It is merely a question of the cost of performing the service required. Imagine using a bulldozer to move 2 cu ft of dirt 100 ft where a wheelbarrow would suffice; or, on the other hand, using wheelbarrows to move 100,000 cu yd of dirt from a cut to an adjacent fill, when bulldozers and motorized graders are available.

Piggyback combines many of the truck's advantages for the short haul with the advantages of rail for the long haul, from a cost standpoint. But wherever the comparative costs of the various modes of transportation are unknown, any method may fail to be used where it could be used to advantage. In railroading, cost information and rate-making have not kept pace with technological change. I have found cases where the rate yielded only 25 per cent of the out-of-pocket cost. I know of other instances where the rate was ten times the out-of-pocket cost. Often the traffic could have been handled much more economically by some other means of transportation than that which was actually used.

Ascertaining rail transportation costs, where so much of the work (even the toot of the whistle) is "joint"—costs incurred in providing several different kinds of service—is most difficult. Yet to permit each railroad, or a group of railroads, to make their own rates—without the guidance of acceptable costing techniques, and without some independent check and control—might be disastrous. This also applies to the rating of piggyback services.

Unless piggyback costs and the influence of piggyback rates on the overall net are accurately appraised and controlled, this service can cause damage—not only to the carrier doing the piggybacking, but to its neighboring carriers too.

Since piggyback is a combination of rail and truck transportation, and in cost to the shipper more nearly compares to truck service and cost than to rail service and cost, it is necessary to make three comparisons: Truck vs Rail; Piggyback vs Rail; Piggyback vs Truck.

Truck vs Rail

I have before me a study made in 1941 for a case before a regulatory commission. This study shows truck costs and rail costs to the shipper. Although the practices have changed some since then, the principles have not changed. The costs in this study can be brought up to date by multiplying them by 2.5, representing the inflation in wage rates since 1941. The study had as its purpose the determination of the difference in cost to the shipper of using rail service, as compared to truck service. It was the desire to justify and establish a lower rate for rail service to compensate for its higher "incidental" cost to the shipper. The findings of the study were approximately as follows:

1. It costs both the consignor and consignee more to load and unload a railroad car than a truck.

2. It costs shipper and consignee more to own and maintain property with track facilities for railroad cars than it does to provide truck loading facilities—and it costs them more for interest on inventory with railroad movement, because of average slower service. More warehouse space, more insurance charges on larger facilities and inventory—all these are added expenses to the shipper, "incidental" to his use of rail service.

3. The consignee can do business with less working capital when he can obtain shall shipments overnight. This saving in capital may be enough to enable a consignee to stay in business, which he might not be able to do with a slower mode of transportation.

Only a part of these differences were evaluated in the study. These valuations were as follows:

(a) The difference in loading costs (rail above truck), including bracing, was found to be 1.68¢ per cwt. Multiplying that cost by 2.5, to convert it to approximate present day costs, brings the difference to 4.20¢ per cwt. The difference in unloading costs was found to be .91¢ per cwt. When this is multiplied by 2.5 to convert it to present day costs, it comes to 2.27¢ per cwt. The costs for both loading and unloading were 2.59¢ per cwt,

which, when brought up to present costs on the index basis, amounts to 6.47¢ per cwt.

In its decision in this particular case the California commission allowed, for the railroad, a differential of 1.5¢ a cwt to compensate for extra expense of loading and 1.0¢ a cwt for extra expense of unloading. Expanded 2.5 times to equal present costs for both loading and unloading, the cost differential comes to 6.25¢ per cwt. (As a check on this cost a 1956 study shows 7¢ per cwt as the cost to load and unload trucks—hence loading and unloading cars costs the consignor and consignee about the same as it does the trucker to load and unload trucks—and this differential must exist in the rail rate if the traffic is going to move by rail.)

(b) Estimates were made for a hypothetical case for the cost of track ownership and maintenance for a rail car "spot." It amounted to 0.6¢ per cwt for the particular case.

(c) Interest on the investment at 5 per cent for two extra days in transit amounted to 0.87¢ per cwt, but expanded to give consideration to Saturday and Sunday closing it amounted to 1.24¢ per cwt. These "incidental" added costs of rail service to the shipper, also, must be compensated for in the rail rate if the traffic is to move by rail.

Piggyback vs All-Rail

Unless there is a differential under the truck rate for rail movement spur-to-spur, piggyback also can be a serious competitor for all-rail haul. This same danger arises with a railroad which is also in the trucking business. That is, some shippers will demand the service that is faster and cheaper (cheaper, that is, in "incidental" expense such as loading, bracing, providing faster and more flexible service, etc.), if rates charged for transportation are equal. Truck, piggyback and all-rail haul—each has its economic zone, and unless prices of service are correctly differentiated, the traffic is likely to be induced to move by the higher cost method—and this higher cost will be paid for, either by the shipper in higher average charges or by transportation companies in smaller profits.

The cost of transporting 20 tons by truck, piggyback and in rail cars of 20 tons, 40 tons and 60 tons for distances of 100 miles, 500 miles, 1,000 miles, 2,000 miles and 3,000 miles are shown in the table (p 20). The costs in Chart I (p 20) are based on an industry spur at each end and include the cost to the shipper of loading and unloading the rail car, bracing, etc. The costs assume new equipment in each instance, i.e., new cars and appurtenances to haul two 35-ft vans on each car, including the cost of the vans as compared to the cost of 40-ft and 50-ft cars to handle the loadings in rail cars.

The costs further assume haul in regular diesel powered through freight trains —no expedited special trains for piggyback hauls. In some instances the reduction in interest and depreciation on the expensive piggyback equipment would compensate for the added cost of expedited service. There are too many special locations and conditions to use anything but averages for illustrative purposes. The use of averages makes it necessary to resort to special studies in most individual cases. It was further assumed that the equipment would return empty one-third of the time for all methods, i.e., truck, piggyback, and all-rail. An average line-haul cost was assumed for all distances; also an average switching time and cost.

Pricing Techniques Little Changed in 50 Years

Not all of the difficulties are caused by inadequate cost data. The difficulty of adjusting rates is a factor. The public is paying a needlessly high price for its transportation because of inadequate cost information and the difficulty of adjusting rates. Regardless of the high efficiency of the rail lines and truck lines, much of their efficiency is lost to the shipping public.

In the areas of transportation where there has been free competition, more economical methods have quickly come into their own, but where there has been monopoly or partial monopoly, coupled with regulatory control, economic choice has been retarded and misled. The pricing of rail transportation and determination of costs of the services have had little change in the past 50 years, but in those areas of transportation where there has been free competition, the pricing of services has been as fluid as have been the changes in methods, and consequent changes in costs.

Piggyback vs Truck

The table and charts show that piggyback is less costly than truck movement for all hauls 100 miles and over. The table also indicates that piggyback haul with two 35-ft vans on each car and 20 tons to the van, costs less than a rail car with 20 tons for all lengths of haul. A rail car with 40 tons becomes the cheaper method at slightly over 100 miles. A rail car with 60 tons becomes the cheaper at less than 100 miles.

Haul by truck is less costly than by rail car with 20 tons up to and slightly over 100 miles. For rail cars with 40 and 60 tons, the truck is more costly for distances somewhat under 100 miles.

It must be remembered that, while these average costs suffice for illustrative purposes, special studies should be made for particular commodities, at specific locations, because the average can vary materially from the high and the low. For example, in switching a particular commodity in a car to or from one industry at one location, the switching time required might be less than 10 minutes, whereas at another location another commodity might require over 90 minutes switching time. All pertinent facts should be considered in determining comparative costs in specific instances.

(Continued on page 20)

Author Ernest C. Poole is a consulting transportation engineer. He was manager of the Southern Pacific's bureau of transportation research until he retired a few months ago.

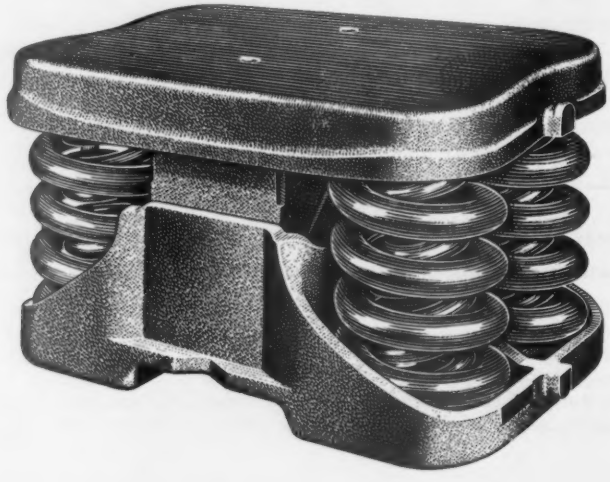
"In evaluating the cost of competing types of transportation—it is the total cost to the shipper (not the mere cost of movement) that must be considered in making effective rates. Thus—if the handling cost to the shipper is greater, or the service is inferior, by one method of transportation than by another, then that difference must be compensated for by a rate differential—if the carrier with the higher incidental costs (e.g., packing) is going to get the traffic."

Service at work-for the B&O

The real test of a supplier's service comes *after* an order is placed. And the B & O can speak with experience on the service of ASF. After Ride-Control Packages were specified for the B & O's forward-looking car-modernization program, they were contacted by an ASF Service Engineer . . . not via an occasional telephone call or letter, but right on the spot in their own repair shops. His job—to help make sure that installation procedures were worked out to the B & O's best possible advantage.

This doesn't mean that Ride-Control Packages are tricky to handle or install—but there are matters of correctly adapting them to various types of trucks. The ASF Service Engineer has the ability to help get the job going smoothly—and he isn't afraid to get his hands greasy in the process.

In short, ASF's policy is simply one of putting our best into each product—and then helping our customers get the best possible service out of it. Is this service valued by ASF customers? They tell us it is—they ask for it often—and they get it. *You* can expect the same service. Providing it to any railroad is as fundamental with ASF as accepting an order!



ASF **Ride-Control Packages**

AMERICAN STEEL FOUNDRIES
Prudential Plaza, Chicago 1, Illinois
Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

CHART I—SPUR TRACK AT BOTH ENDS

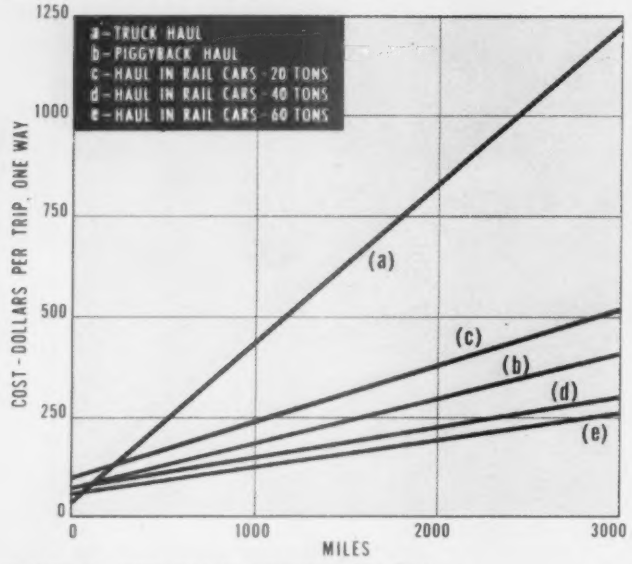


CHART II—SPUR TRACK AT ONE END ONLY

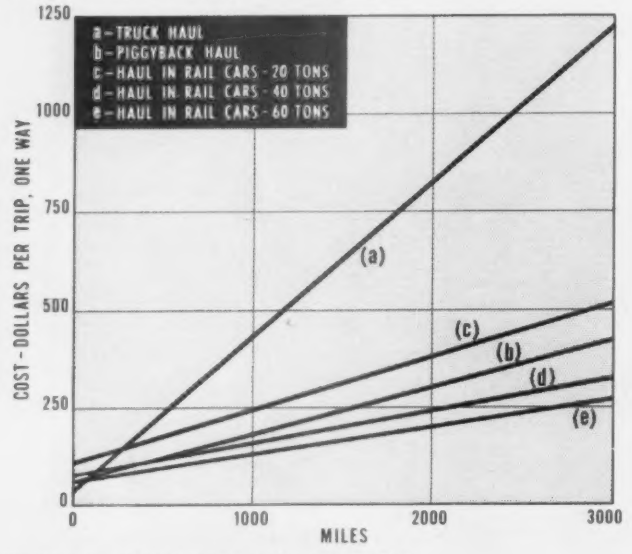
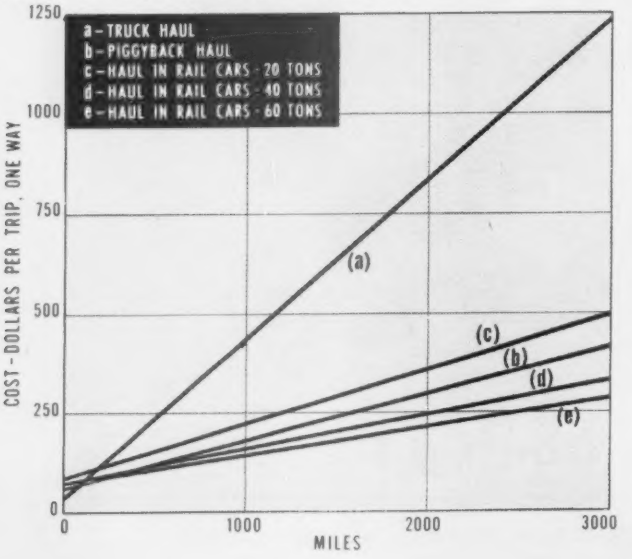


CHART III—SPUR TRACK AT NEITHER END



(Continued from page 17)

The cost of handling 20 tons by truck, by piggyback and in rail cars with 20, 40, and 60 tons to the car for distances of 100, 500, 1,000, 2,000, and 3,000 miles with the rail car spotted at the industry at the origin end only are shown in Chart II. The same assumptions and unit costs were used in these estimates as in Chart I, with the exception that a cost was included for the transfer of the load from the rail car to truck at destination and delivery to the industry.

In this case, as in Chart I, piggyback hauls are less costly than hauls in rail cars with 20 tons for all distances. Piggyback is more costly than 40 tons in a rail car for distances over 100 miles whereas with 60 tons in a rail car, the distance where both costs are equal is just about 100 miles.

In Chart III the cost comparisons assume that the shipments both originate and terminate at off-rail points, and when handled in a rail car, the load must be transferred by truck between the rail car and the industry at both ends. Otherwise, the assumption and unit costs are the same as in Charts I and II.

Here as before, piggyback hauls are less costly than hauls in a rail car with 20 tons for all distances. With 40 tons in a rail car, piggyback haul is less costly for distances up to about 500 miles, but with 60 tons in a rail car, this distance is reduced to about 250 miles.

It is obvious from the charts that a great many hauls are being made at extravagant costs.

Effects of an Inflexible Rate Structure

Rail cars are being used where they should not be used, trucks are being used where they should not be used and piggyback, no doubt, is being used where it should not be used. All of this comes about because of an inflexible rate structure and inadequate cost data. A shipper cannot, ordinarily, afford to use a rail car and pay the same rate as he can afford to pay for piggyback or truck service. He cannot, in many instances, afford to use piggyback and pay the same rate as for truck service.

Unless there are different rates for the three methods of transportation, the shipper will very often use what is actually the more costly service, because (in the short run) the expense to him will be less and/or the service will be more convenient. But, in the long run, the shipper also will lose when there is large usage of less economical transport—because the average cost of all transportation will be higher than necessary.

COST OF HAULING 20 TONS

INDUSTRY TRACK AT BOTH ENDS OF HAUL

Distance Miles	By Truck	By Piggyback	In rail car with 20 tons	40 tons	60 tons
100	$ 80	$ 74	$119	$ 77	$ 64
500	240	120	173	110	92
1000	440	178	240	153	127
2000	840	295	375	236	197
3000	1,240	410	510	320	267

RAIL HAUL COST, 20 TONS

Distance	Industry Track at One End of Haul Only			Industry Track at Neither End of Haul		
	In car with			In car with		
Miles	20 tons	40 tons	60 tons	20 tons	40 tons	60 tons
100	$115	$ 85	$ 75	$107	$ 88	$ 82
500	169	118	103	161	121	110
1000	236	160	138	228	163	145
2000	371	243	208	363	247	215
3000	506	328	277	498	331	285

'Catering Service' for PRR Diesels

Diesel switchers are serviced at their assigned locations, instead of being moved to fixed facilities, by the Pennsylvania in the Chicago area. Savings are substantial, according to the railroad, since much locomotive time is conserved.

To facilitate the operation, which involves some thirty-five switchers, the railroad has acquired a new mobile truck unit. Built by the Farrel Manufacturing Company of Joliet, Ill., to the railroad's specifications, the truck carries fuel oil, lubricating oil and sand to yard locations. The driver, who also operates the unit, can completely service a switcher in about twenty minutes.

The capacity of the unit, which is mounted on a standard chassis equipped with power steering, is one cubic yard of sand, 1,600 gallons of fuel oil, and 25 gallons of lube oil in 5-gal cans. Average servicing requirements per locomotive range from 250 to 300 gal of fuel oil, and 100-350 lb of sand, depending on operating conditions. Lube oil is checked for viscosity and gaged for quantity in crank case. Any viscosity below normal is reported immediately by the driver for corrective action.

The truck fuel tank is equipped with a pumping unit driven by the engine. Fifty feet of fueling hose is supplied, reel mounted for easy access and withdrawal. Accurate record of fuel oil supply to each locomotive is provided by a meter.

The sand tank has a hose connection for coupling to the locomotive air line, furnishing pressure to blow the sand into sand boxes. Sufficient hose is available to service boxes in all locations without moving the truck.

Loading of the truck is done by the driver at the Colehour or 59th street yards, whichever is more convenient.

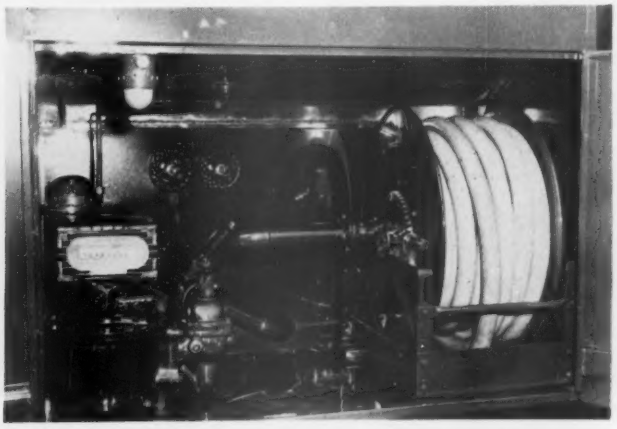
HERE'S THE SCHEDULE FOR SERVICING EACH SWITCHER EVERY THREE DAYS, REGARDLESS OF LOCATION ►

Monday—110th street, Dolton
Tuesday—Damen, Lake and downtown area
Wednesday—Dolton, East Chicago, Indiana
Thursday—Damen, Lake
Friday—110th street, Dolton
Saturday—Colehour, 110th street
Sunday—Balance at 110th street and Colehour

OPERATOR RELOADS sand at Colehour. Servicing includes fuel and lubricating oil.

ALL SAND BOXES on locomotives can be refilled quickly without moving the truck.

MOBILITY OF SERVICE unit permits easy access for refueling without moving diesels.



COMPACT FUEL OIL control compartment houses reel-mounted hose and metering device.

Refrigerator Car Doors of Aluminum are

EASILY OPERATED BY ONE MAN

Refrigerator car doors of Reynolds extruded aluminum have been built by Pacific Car and Foundry for North American Car Corporation. These companies find that refrigerator car doors of rugged, lightweight aluminum are an ideal way to save weight and cut operating costs.

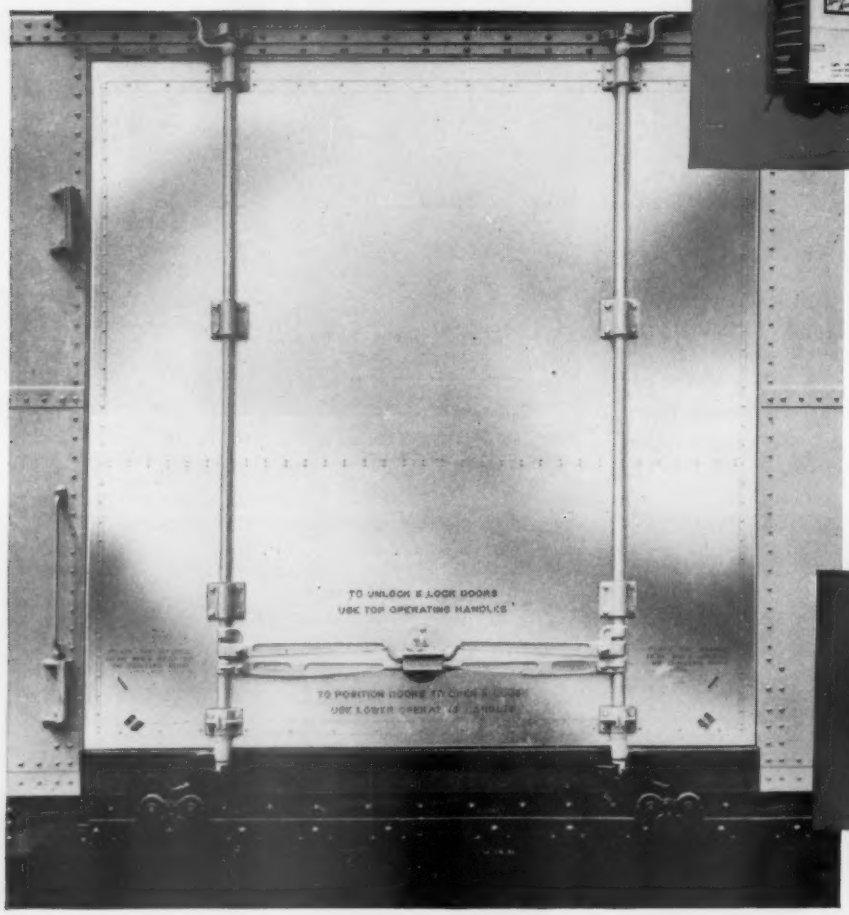
Total weight of the new aluminum door complete is only 740 lbs. compared with 1090 lbs. for steel doors. Light as they are, aluminum doors will take all the wear and tear of daily railroad service and still be easy to operate. *One man can open these doors easily*, without resorting to "crowbar" tactics.

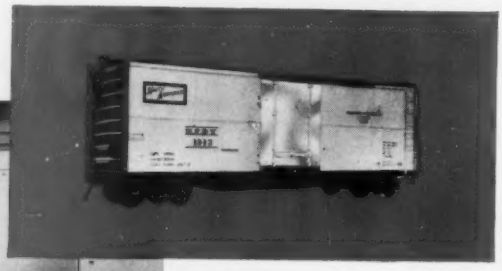
Aluminum doors are virtually maintenance-free, do not need painting because aluminum is rustfree and corrosion-resistant.

Reynolds designers worked with Pacific Car and Foundry to develop these new doors and will be glad to work with you on *your* new applications for aluminum.

For details on important savings in baggage car doors, box car doors, loader beams, floors and floor racks, car roofs, crossbuck and operating signs, call your local Reynolds office, or write *Reynolds Metals Company, P. O. Box 1800-TM, Louisville 1, Kentucky.*

See "CIRCUS BOY", Sundays, NBC-TV.
Watch for Reynolds on "DISNEYLAND", ABC-TV.





New aluminum refrigerator car door complete, weighs only 740 lbs., compared to 1,090 lbs. for steel.

The Finest Products Made with Aluminum are made with REYNOLDS ALUMINUM

1. Mr. Businessman goes by train . . .

2. Settles back to prepare his presentation . .

3. Steps from train to rental auto at destination . . .

The Tale of Mr. B:

His Travel Dollar Works Two Ways

Rail passenger service and car rental service make a natural team in the new "rent it here, leave it there" setup. Car rental people see bright prospects for such tie-ins—if participating railroads will push the service.

Rail-auto "package" travel has a tremendous potential market—but it's a market that will require more "selling" than is currently being done.

At least that's the view of some of the leaders of the car rental business, who see the need for a big promotion job to reconvert a public wedded to the "drive-your-own-car" travel philosophy. The private automobile is too deeply rooted as an American institution, they feel, to be supplanted by combination

4. Drives back over his route, point by point . . .

5. Returns rented car back at his home city, trip completed.

travel—unless the virtues of combination travel are placed clearly and frequently before the motoring public.

At the moment, consideration is being given to the possibilities of just such a program—joint advertising efforts to promote rail-auto service. But until a cooperative program is worked out it's unlikely that promotion will get the "push" which the car rental people (and a certain number of railroad men) feel would benefit both rental operations and the passenger business of the participating railroads.

Currently, the hottest feature in the rail-auto field is probably the "rent it here, leave it there" policy started last February by the Hertz Corporation. Hertz began offering the deal on a nationwide basis and the plan has developed a tremendous response—probably because the "demand" existed at the time the service was offered.

Wide Travel Potential

"Rent it here, leave it there" makes it possible for car rental customers to pick up a car in one city and return it to Hertz at another city. It permits a salesman, for example, to take the train from his home city to the farthest point on his itinerary, pick up a rented car there and work back toward his home, covering his territory point by point and surrendering the car at his base city. Or he can do the reverse—go out by rental car, return by train.

Likewise, it may prove a boon to vacation travel, either on the drive-out, train-back plan or on a "triangle trip" basis, where a vacationer might take a train from Chicago to the Pacific Northwest, drive a rented car down the Pacific Coast and return home by train from southern California.

In view of the potential which car rental operators see in this plan and other features of rental services, it's not surprising that Hertz would like to see more railroads following the example of roads like the Pennsylvania and Union Pacific and the Pullman Company in plugging rail-auto.

Both Walter L. Jacobs, president of Hertz Corporation and its subsidiary Hertz System, Inc., and Joseph J. Stedem, executive vice-president of the organizations, see big possibilities for the railroad-car rental tie-up. But, they say, many railroads are hardly past the stage, advertising-wise, of merely citing the availability of the service in a small timetable note.

Highway Advertising

What would Hertz like to see? For one thing, billboard use of railroad overpasses crossing highways—a feature which Hertz itself used in ads several years ago. In the minds of the car rental men, there's no better place than a traffic-cluttered highway to impress upon motorists the theory of "next time take the train—rent a car at destination."

Hertz, with contracts covering some 27 railroads and service available at about 245 rail terminals, contends that railroad passenger service can be made more comprehensive (and, therefore, more attractive) when tied in with car rental at destination. Their position: When you've got a better service to offer, why not tell people about it?

Railroading After Hours with Jim Lyne

PHONE COMPANY SCHOOL—I have a letter from Dick Overton—historian of the Burlington and the C&S and formerly professor of business history at Northwestern University. Mr. Overton has been teaching this summer at a special 4-weeks' summer course in 'liberal arts'—being put on by Williams College for some 40 officers of the Bell Telephone System. Other colleges have similar programs for a total of some 100 AT&T officers. There is nothing in the course that has specific reference to the telephone business—the subjects ranging from American art and architecture through economic history and political theory.

Mr. Overton sees the course serving primarily as a mind-opener; and he believes a similar mind-stretching operation might be equally helpful to railroad officers. In various ways (e.g., at such schools as Stanford, USC, Harvard, Columbia, N.W.U.) more and more railroad officers are being offered educational opportunities—but nowhere on quite this AT&T pattern.

ANOTHER APPROACH—A chief executive of a big railroad, which has had a lot of its officers in "management development" programs, told me the other day that he is more and more convinced that education in specific railroad duties is just as important a part of management development as training in managerial techniques.

"What good is it," he asked, "if the president has learned how to get along constructively with his vice-presidents, and the vice-presidents with their subordinates—and so on down the line—if none of these fellows has learned the best ways of doing the day-to-day job of running a railroad? I am in favor of management development courses. I am also in favor of a system of education that will teach a superintendent all he needs to know (and it is a lot) about how to be the best possible superintendent. And the same goes for all other management and supervisory positions."

Nobody can learn to be a superintendent or a traffic salesman by reading a book or taking a course, but reading the book or taking the course might persuade him to search for knowledge and experience he might otherwise not know about.

WASH-I-TAW, ARK.—I have a letter from Chet Solomon, an accountant on the staff of the UP vice-president and general auditor—who recalls that he and I went to high school together at Herington, Kan., where both our fathers were Rock Island employees. Chet has a nomination for a station name usually mispronounced. It is Ouachita, Ark., on the Rock Island and, he says, it is called "wash-i-taw"—a pronunciation nobody ever gets right until he hears somebody else say it first.

AIN'T SHE A BEAUT!—Bob Hansen, who handles GN public relations at Seattle, has sent along a corroborative snapshot or I'd never in the world believe this one. It is a station named "Ainshea Butte" (just a station sign, no station building) on the GN's Klamath Falls line.

The story is that Downing Jenks (inadvertently I'd suspect, and hope) named this station when he was on the Great Northern. He saw a spur running into the pit near this location where volcanic cinders are taken out for ballast, and exclaimed: "Ain't she a beaut!" I don't know whether there's really a butte there or not. I never saw a knob at Bald Knob, Ark., on the MoPac, nor at Knobnoster, Mo., on the same railroad.

Walter Ellis, assistant to auditor of expenditures of the C&O at Detroit, tells of a station named Sears—in Michigan on the former Pere Marquette line. The gent at this station for a good many years was, of course, a man named Roebuck.

DEDICATED TO BETTER RAILROADING

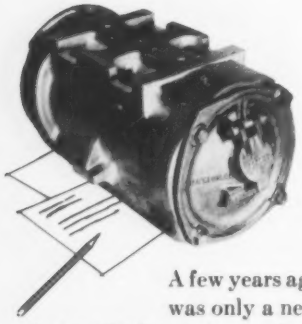
The Ton-Mile

AMERICAN Brake Shoe COMPANY

SEPTEMBER 1957

THE TONNAGE TRAVELS BY RAIL: New, push-button classification yards, with the latest in automatic equipment, are handling the nation's tonnage faster and more efficiently than ever before.

Why More and More Roads are Testing NATIONAL® Cartridge Bearings!



Tests under extreme operating conditions indicate a new standard of bearing performance for freight cars.

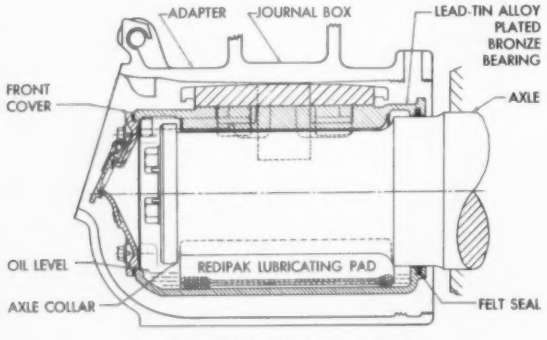
A few years ago, the National Cartridge Bearing was only a new concept in solid journal bearing design. Today, it is a reality—with thousands of miles in the toughest kinds of freight car service.

To date, over twenty roads are confirming what our special journal bearing laboratory has found: that the National Cartridge Bearing stands up to greater impact; that it requires very little maintenance; that it provides greatly lengthened life; that it minimizes the chance of hot boxes.

In addition, the National Cartridge Bearing offers several important savings over roller bearings: savings in first costs . . . savings in installation costs . . . savings in removal costs when a wheel change is needed.

If your road is not already testing this "journal bearing of the future," why not see for yourself what this remarkable new cartridge bearing can do under your particular operating conditions?

Wheel, axle and cartridge sets are made up in advance for assembly into trucks. No bearing work is done on the rip track.

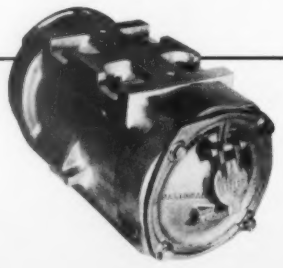


CROSS-SECTION OF NATIONAL CARTRIDGE JOURNAL BEARING UNIT

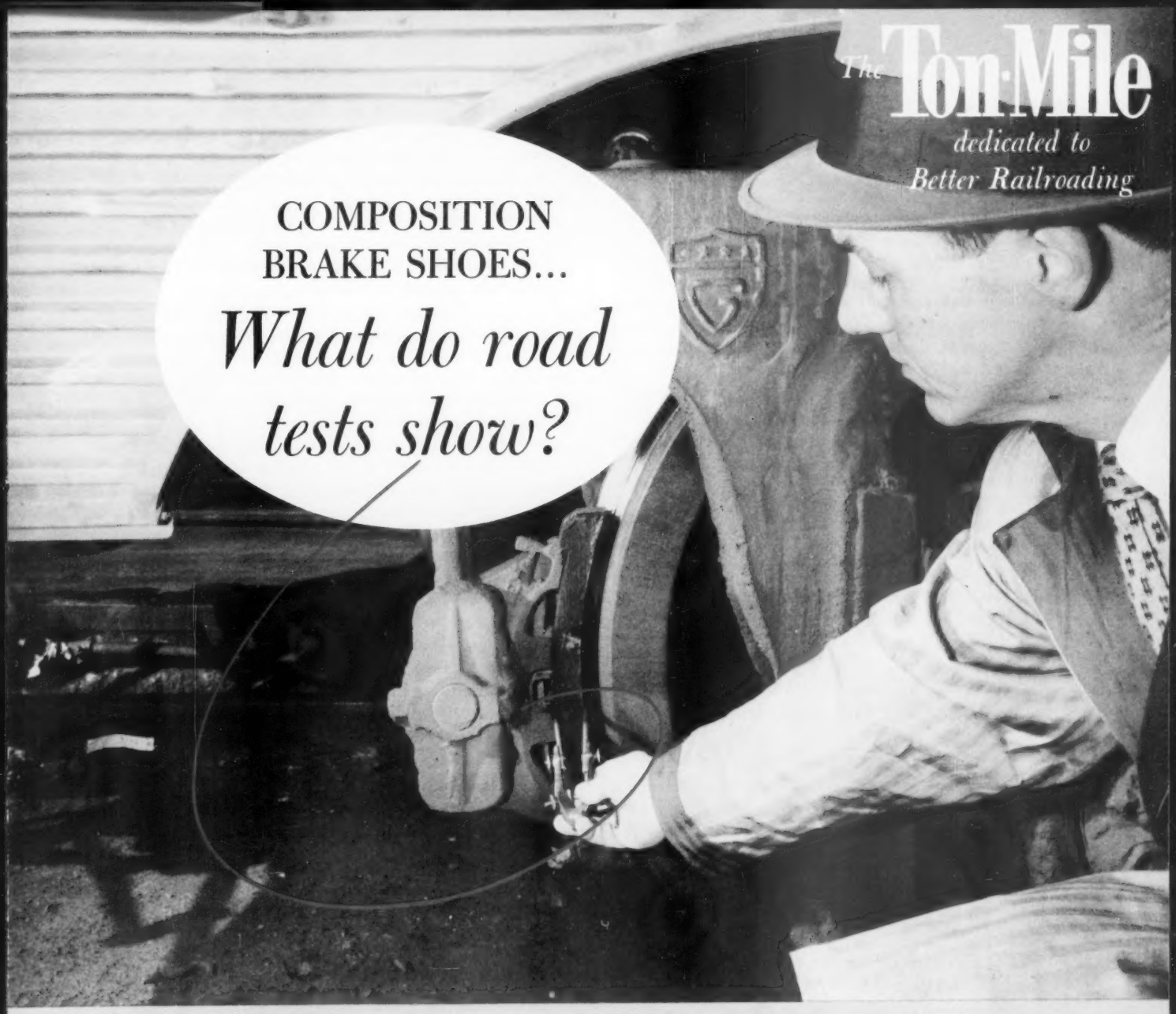
The cartridge bearing encircles the journal. The journal collar is machined off to permit assembly, and a separate collar is secured with cap screws. The cartridge unit, shown with an adapter, which can be used with an integral box or a pedestal side frame, is cast of high strength bronze and plated with a heavy-duty lead-tin alloy. It contains its own lubricating system and is effectively sealed by a lubricated felt ring riding on the conventional dust guard diameter. The lubricating pad is installed when the cartridge is applied to the axle. Oil is contained in the cartridge, not in the box. The usual journal box is not needed.

AMERICAN Brake Shoe COMPANY

RAILROAD PRODUCTS DIVISION
530 Fifth Avenue • New York 36, N. Y.



The Ton-Mile
dedicated to
Better Railroading



COMPOSITION BRAKE SHOES... *What do road tests show?*

Why are some road test results erratic? Which factors must be measured? What can safely be taken for granted? How should such tests be made? What do the results show? Here are some answers.

Suppose you wanted to test a new kind of brake lining for your automobile. How would you go about it?

Being of logical turn of mind, you would first decide what you wanted to find out about this new brake lining. If it was durability, for example, you would measure the wear frequently. You would record mileages; you would keep track of speed, weather conditions, your own driving habits—everything that might affect the life of your new material.

Being a prudent man, you would inspect your brake drums frequently. You would measure them before, during, and after the test—just to make sure the new lining wasn't wearing them unduly.

And being a practical man, you would compare your findings with the results of identical tests made on your regular brake lining. Then, and only then, would you be able to say that one lining was better than the other.

You certainly wouldn't put the new lining on just one wheel of your car, and slack off on that wheel's brake adjustment. The result of such a test would obviously be meaningless.

And you surely would refuse to accept the findings of a friend who had tested some brake lining this way. No matter how highly you regarded his opinions on other things, you would feel that he hadn't run very conclusive tests. Besides, his car might be different from yours . . . his driving habits different . . . even the kind of traffic might be different.

Yet, when it comes to evaluating composition and metal railway brake shoes, *we run the risk of accepting findings of road tests which, because of practical considerations, are almost as onesided as the hypothetical automobile brake lining tests mentioned above!*

These are strong words indeed. But they fit the facts. Road testing of composition shoes *must* be improved in order to provide railroad management with valid findings on which

to base sound decisions involving the expenditure of many thousands of dollars. Here, then, is what we all need to know —and what tests to date actually show.

Facts needed:

To obtain the facts about composition brake shoes every effort should be made to promote *thorough, complete, and comprehensive road testing* of every type and make of brake shoe. We all should be vigorously opposed to tests that investigate only one aspect of a train's total brake picture. And we should particularly avoid the high-pressure use of isolated test results which, taken out of their context, present a completely misleading conclusion.

The big advantage that composition shoes offer is *longer life*. Other points in favor of compositions are higher friction, which makes possible lighter braking systems; friction characteristics that promote smooth stopping; quiet operation; and light weight. But like any other development, they present a complex picture of advantage and disadvantage. Recognizing the many merits of composition shoes, we feel that they *deserve* careful, thorough investigation—not only in the laboratory, as we have given them, but also in road tests, which the railroads can give them.

As the man says on television, all we want are the *facts*. Not just some of the facts . . . not a mixture of facts and conjecture . . . but the full facts of composition brake shoes in general railroad service.

How to find the facts

How do you find the facts you need to arrive at sound, valid conclusions? By road testing—thorough road testing.

What constitutes a thorough test of brake shoes? Ideally it should be performed on a train whose consist does not vary, that is run over one route, and most importantly, equipped throughout, from locomotive to end car, with one type of shoe. Its brakes should be in normal condition and kept that way. The test should last long enough and sufficient records be kept to enable thorough evaluation of safety, shoe wear, and wheel wear.

Now let's look a little more closely and see where deviations from this ideal affect the result.

First, the matter of equipping the entire test train with the same type of shoe. This is perhaps the most vital point, for failure to do so in the past has harmed the results of many tests. The reason is simple: composition shoes have completely different braking characteristics from those of metal shoes.

Here's why: stopping a train is a tug of war between two teams, the friction of the shoe on the wheel, which becomes the retarding force, and the friction of the wheel on the rail, which is called adhesion. If the former exceeds the latter, the wheels lock and slide. The fact is that adhesion, which keeps the wheels from sliding, is not the same at all speeds; on the graph it is a curve. The friction of the standard metal shoe against the wheel behaves very much like adhesion; i.e. metal shoe retarding force increases as the train speed decreases. However, the friction graph of the composition shoe is more or less a straight line, which may cause slides at high speeds by exceeding the available adhesion.

Thus certain problems present themselves to the braking engineer. By making mechanical changes in the brake system, the engineer can make the two types of shoes "match" (equal stop distances) at a given speed and a given brake application. *But they will match at only this speed and pressure —no other.* If the match is set at say 80 mph, the composition shoe will underbrake at all lower speeds in comparison to the metal shoe. If the match is set at a lower speed, the composition shoe will tend to overbrake and slide wheels at the higher speeds.

Obviously, then, you shouldn't mix the shoes on the same test, regardless of "match" speed, because the metal shoes will too often carry most of the braking load and receive, in consequence, the greater wear.

Item: In light applications of the brakes on, say, a slowdown, the smaller cylinder for the composition shoe will barely overcome the normal rigging resistance, with the result that the composition shoe barely touches the wheel, while at the same time the standard metal shoe will have been brought into full play.

Item: Railroad "A" operated a test train with mixed metal and composition shoes down a long, steep grade—light pressures, low speed—and measured wheel temperatures at the bottom. The wheels equipped with metal shoes were excessively hot, and the wheels equipped with composition shoes were cool, indicating that the metal shoes were doing the braking for almost the entire train. Railroad "A" eventually abandoned the test.

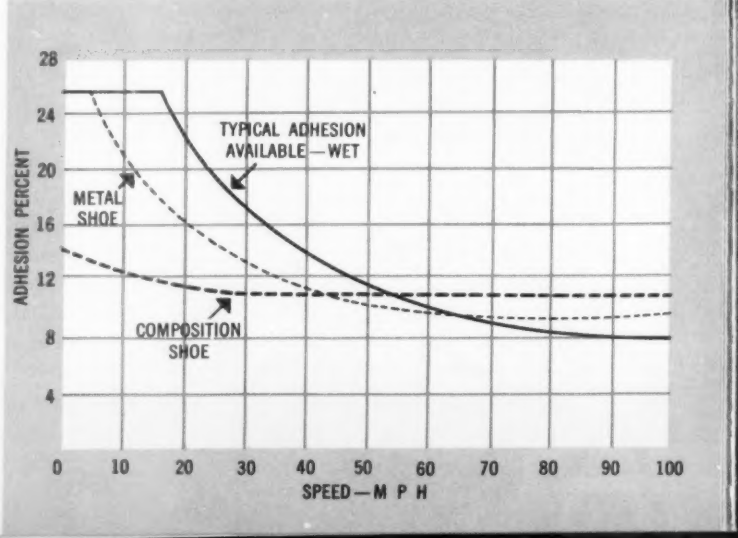
Item: Because of the close match between metal brake shoe friction and rail adhesion, the metal shoe usually results in shorter stops. Consequently, where composition shoes are present, the engineer, in an effort to obtain normal retardation, will often tend to overbrake, especially at low speeds. Result: Again, the metal shoes carry the greater share of the work . . . and the wear.

Item: Railroad "B" operated composition shoes on four cars in an eight-car train. The composition shoes showed little wear, while the wear of the metal shoes far exceeded their usual rate on these cars. This proved that the metal shoes were doing the work in the mixed consist. The cars are now being reconverted to the metal shoe.

Complete-train tests needed

The most accurate results are obtained from a series of comparative tests run on the same train. During the tests the train's consist should remain as unchanged as possible and other braking factors, such as braking ratios, rigging efficiency, route, and train handling, should remain constant. For obvious reasons this has been extremely difficult to do, and in consequence the results of many of the brake shoe tests run to date are questionable.

Item: In one of the few tests where the variables were controlled and the train equipped entirely with composition shoes, railroad "A" saw the composition shoe in a new light. It found that



while the life of the composition shoe exceeded the metal shoe by 2½ and 3 to 1, wheel wear was the converse: the wear of the wheels equipped with composition shoes was greater by 6 to 1 than those equipped with metal shoes. However, since this test involved specialized service, it does not provide the full answer for general railroad service.

Adequate stop distances essential

At the beginning of the test, stop distance runs should be made from several speeds under a variety of conditions. This is an important consideration in evaluating not only economy, but also safety. Several railroads have found that with composition shoes, they could not obtain adequate stopping distances and were forced to modify their testing program. Once having established the safety of the shoe and the braking ratios, the economy of shoe life and wheel wear may then be studied.

Item: Railroad "C" equipped a full test train with composition shoes. Original brake settings provided inadequate stop distances, but showed favorable wear results. Later, upon increasing brake pressures to obtain almost normal stop distances, the wear of shoes and wheels became intolerable.

How long should a test be?

Having decided that the tests should be run on a single, unvaried consist, equipped with one type of shoe, over the same route, and having planned the required work on the brake system, the next question that faces the railroad running the test is, "How long should the test run?"

When asked how long should a man's legs be, Abe Lincoln is supposed to have remarked, "Long enough to reach the ground." A thorough test should be long enough to be thorough. This has not always been true of tests in the past, for understandable reasons.

Specifically we feel that the ideal test should last until *both* brake shoe wear and wheel wear can be completely evaluated. Ideally, this means until all the wheels on the train have been condemned and scrapped, and in addition, to measure shoe life, until at least 2 or 3 brake shoes have been consumed in each position. For practical reasons, it may be necessary to modify this to an agreed-upon point in the test where sufficient numbers of wheels and brake shoes have been replaced to establish a trend.

Analyzing the results

Railroad experience in the past has shown the wisdom of utilizing all sources of information, all groups concerned, in testing new developments. When evaluating composition shoes, this cautious attitude is as important as ever. Too many elusive factors that require the specialized knowledge of one or another group, make this necessary.

Item: Railroad "D" obtained data on shoe life only, in a mixed test, upon which it based its findings of substantial savings with composition shoes. However, incomplete measurement of wheel life, and overly high setting of 80 mph for the "match" point for composition and metal shoe cars of the mixed consist train, were not properly taken into consideration. The results gave a distorted economic picture.

Metal brake shoes and composition shoes have different braking characteristics, as shown in this chart. Consequently, a test using both metal shoes and composition shoes on the same train will have inaccurate results. As explained in this article, factors of different friction characteristics, brake rigging, and stop distances will usually cause the metal shoe to do most of the work in braking.

The principal aim of an analysis is to objectively evaluate the factors of safety and then summarize the over-all economies.

How to evaluate shoe and wheel wear

Shoe wear: During the test, brake shoes should be carefully measured at specific points upon removal and weighed to find actual material loss to eliminate the variables of nonuniform wear caused by faulty rigging. Once all the variables are factored into the test, a figure for total shoe consumption can be arrived at.

Wheel wear: The characteristics of a brake shoe can have a decisive influence on the life of a wheel. When a train is braked, immense energies—in the order of millions of foot-pounds—are converted into heat by the shoe friction on the wheel. This energy must go somewhere—either into the shoe or into the wheel. Metal shoes, being good conductors, absorb some of this heat; composition shoes, being poor conductors, are likely to absorb very little of this heat. Thus it is important to list precise reasons for wheel removal to evaluate possible heat effects.

Moreover, composition shoes and metal shoes wear the wheel differently, both in pattern and amount. On wheels equipped with metal shoes, the wear—which is mostly *rail* wear—is well known, and the standard gauges have been evolved to measure it. On the other hand, composition shoes have been known to wear the wheel on either side of the center of the tread, occasionally leaving a relatively high spot precisely where the standard gauge touches the tread. Therefore, when the wheel worn by the composition shoe is turned, it may often be necessary to remove more metal than normal to restore the contour. This may result in fewer turnings during the life of the wheel. But wheel life must be measured not only in terms of miles between turnings, but also in *total* mileage.

To measure wheel life more accurately, contours should be made before and after turning to measure the amount of metal removed during service and restoration of contour. Failure to do so has resulted in incomplete findings. For example, one supplier announced longer life *between turnings*, an analysis that did not include over-all mileage or wheel life.

Complete report a must

Once all the facts are in, a good testing procedure requires that a complete, detailed report be written. This will not only clarify the results, but it will also ensure a considered evaluation of each important factor in reaching a final conclusion. The knowledge that such a report is being prepared will help to prevent a premature announcement of partial facts.

Item: Railroad "E" conducted an extensive mixed train test of brake shoes. A supplier prematurely announced overwhelming savings for the composition shoe. These claims were not even close to agreeing with the railroad's data, which are still being evaluated!

Largely because of the difficulties involved, road tests of the composition shoe have yet to show conclusive results. Some are incomplete; some are one-sided; some are contradictory ... few are sufficiently comprehensive. We of American Brake Shoe Company feel that thorough testing is in order before decisions affecting safety and economy are made. This has been the traditional pattern of railroad progress. The composition shoe, which, at its present state of development, has a complex set of advantages and disadvantages, *deserves* the same careful approach.

Tolerances are close! A Pullman-Standard operator marks the exact diameter of the bored wheel hub to facilitate its being mated with an axle that has the correct clearance for proper fit

Wheel boring requires exceptional precision—making uniform quality of the wheel highly important, according to Pullman-Standard. Even the nature of the mating surfaces, their degree of smoothness, influences the operation!

Putting Southern® Wheel Quality to Work . . .

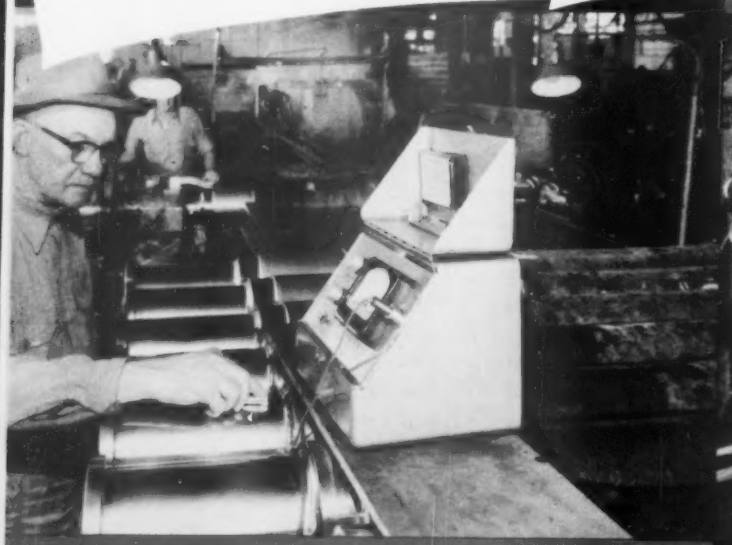
in mass-production wheel mounting at Pullman-Standard

At Pullman-Standard Car Manufacturing Company's Bessemer, Ala., plant, Southern cast steel wheels have fitted perfectly into a highly mechanized wheel mounting technique that demands the utmost in wheel quality.

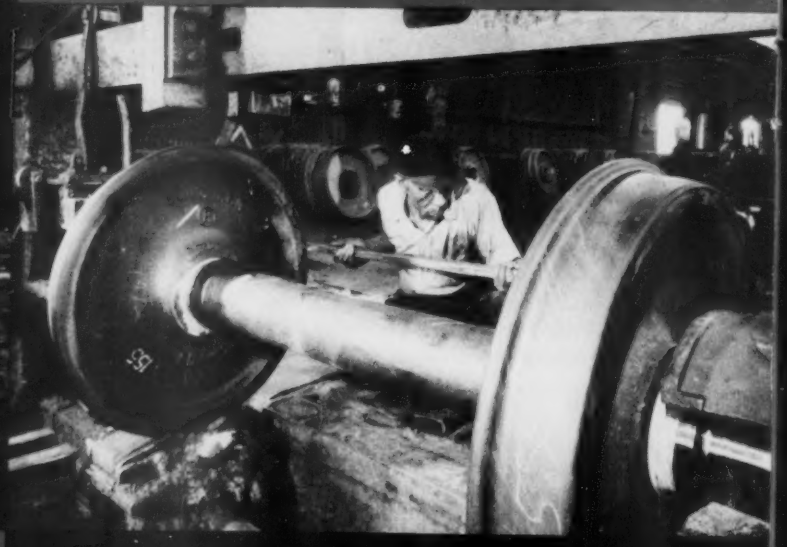
Wheel mounting, with minus tolerances of 0.006 to 0.007" and joining forces limited to 80 to 120 tons, is an exacting art made more exacting by mass production conditions.

One of the important foundations that Pullman-Standard relies upon to maintain precision and production is the uniform quality of Southern cast steel wheels—their accurately controlled hardness, their true concentricity and balance—factors that insure dependability and lasting performance.

Axle diameters are carefully measured and recorded after finish turning. Axle will later be fitted with a wheel hub that is precisely 0.006 to 0.007" smaller. Automatic handling equipment shift axles from machine to machine.



Burnished journal seats have the glass-like surface so important to long operating life. Electronic measurement finds the finish to be within a few microinches of perfect smoothness.



A superb fit of precisely machined components: A Southern cast steel wheel is mounted at a force between 80 and 120 tons and ready for a new Pullman-Standard freight car.

THE NEW LOOK IN RAILROADING:

Nothing but the best!

Great Northern's new classification yard at Minot, N. D., features latest in push-button facilities and heavy-duty trackwork and specialties

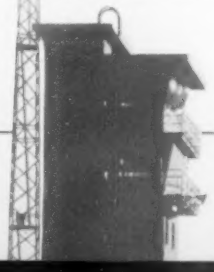
"We wanted nothing but the best for this yard—push-button, automatic classification; complete facilities; heavy-duty mainline trackwork and equipment—the works." That is the way one Great Northern official expressed it and that is what they got: The Gavin Yard at Minot, N. D., is one of the most modern and efficient classification yards in the country and a symbol of railroading's new look, consisting of the latest and the best.

The Great Northern has invested $6,500,000 in the Gavin Yard and feels that it is worth every cent. With its radar- and computer-controlled retarders; push-button automatic switching; a vast network of communications; complete supporting facilities, its strong backbone of 50 classification and storage tracks, plus 6 receiving and departure tracks, all equipped with new Racor® turnouts, fully protected by lubricators, Snow-Blowers and No. 22 switch stands, the Great Northern has sliced off huge chunks of time on its freight runs through the heart of America's wheat country. Moreover the railroad feels that it has not only a yard that represents the peak of efficiency, but one that will stand up to the punishing wear of moving today's tonnage faster than ever before.

A philosophy of the best.

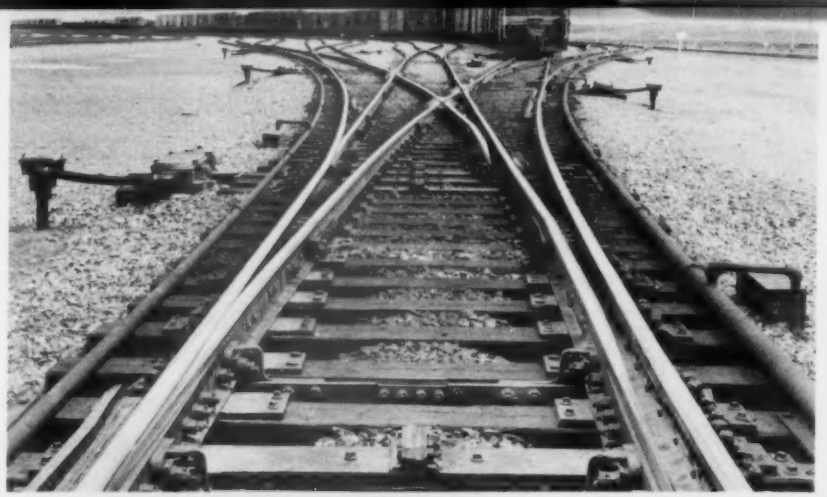
The Great Northern's philosophy of asking for the best can be seen in the specifications for trackwork given to American Brake Shoe's Railroad Products Division: descriptions of turnouts include manganese switch point guards; security braces; samson switch points; "MJ" rods; integral base, integral tie plate, solid self-guarded manganese frogs. To protect this equipment two Racor Lubricators were ordered, and all switches in the humping area were provided with Racor Snow-Blowers, having automatically controlled cycling.

This viewpoint also represents the philosophy of American Brake Shoe, who supplied the equipment. Heavy-duty manganese trackwork is the logical answer to the greater punishment handed out by today's increased freight tonnages and heavier traffic. The classification yard carries more responsibility than ever for the efficient operation of a railroad; it deserves the best.

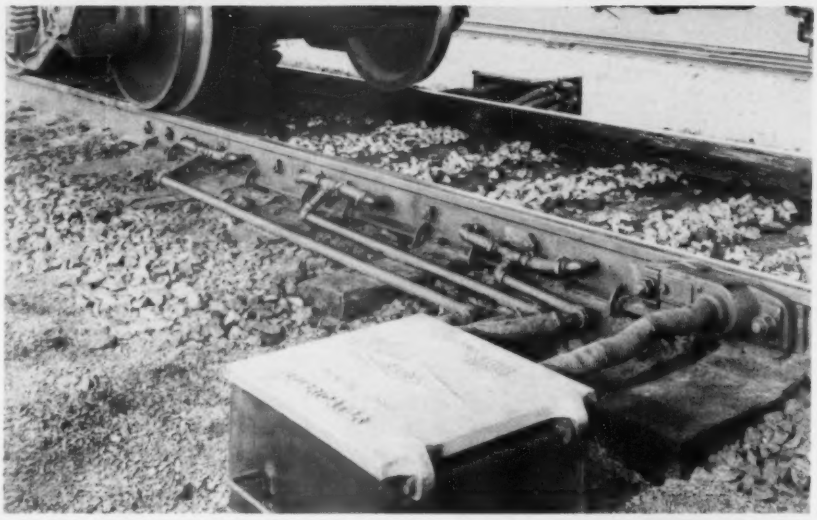


Brake Shoe TON-MILE

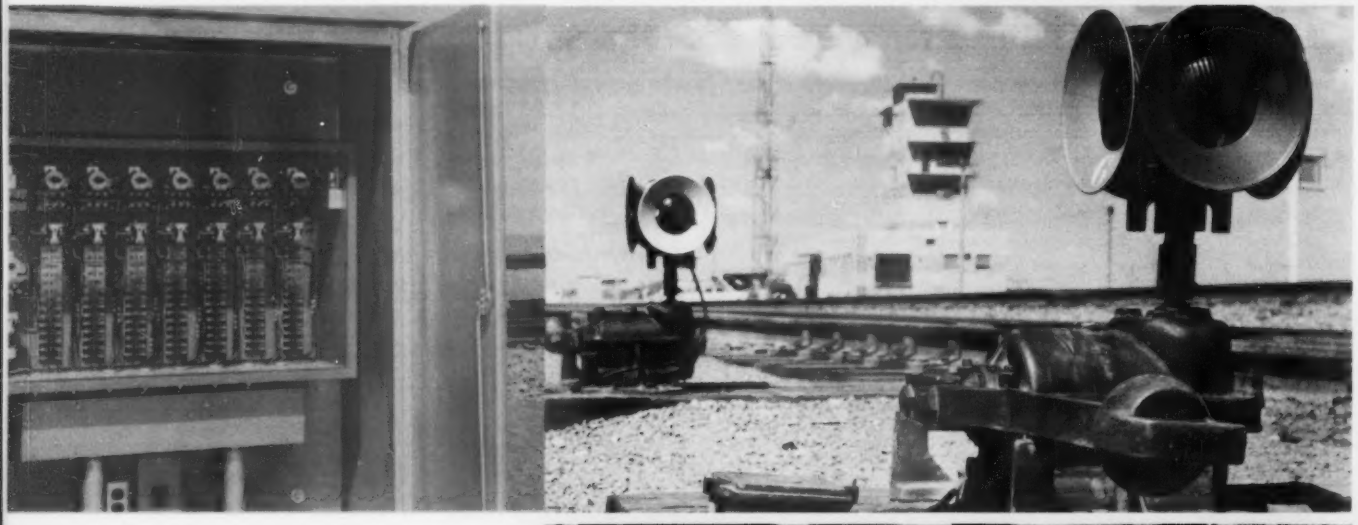
One of five Racor® lap turnouts at head end of yard. New, heavy-duty equipment, they are furnished with manganese switch point guards, security adjustable braces, samson switch points, "MJ" rods, Snow-Blowers. The head end also required 31 Racor No. 9 turnouts, standard and equilateral, similarly furnished. The classification and storage tracks and switching leads contain 127 Racor No. 9 and 12 Racor No. 11 turnouts.



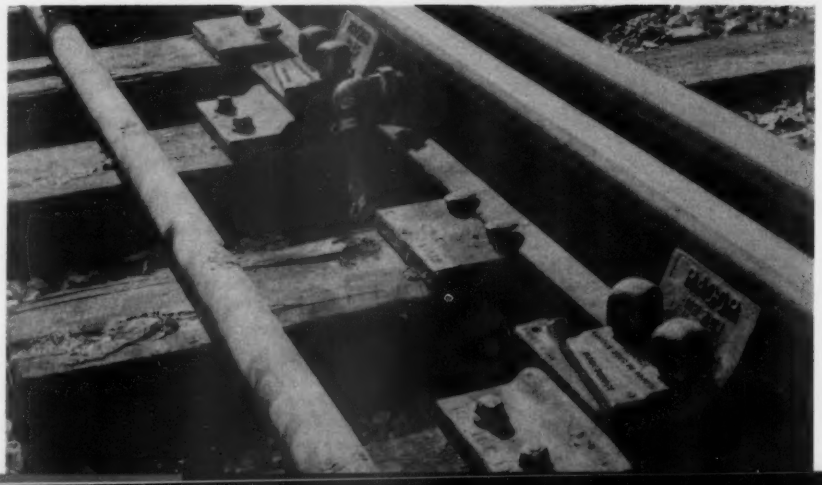
Two Racor Lubricators are strategically placed on the hump to provide rail and turnout lubrication and more uniform rollability throughout the yard.



Racor heavy-duty No. 22 switch stands, 138 in all in the Gavin Yard, are used where switches are liable to be run through accidentally. When this happens, switch points are partly opened by the wheel flanges, and the throw automatically completed by the switch stand, including rotation of the target lamp. This will avoid damaged switches, operating delays, cost of rerailing cars and locomotives and repairing switches.



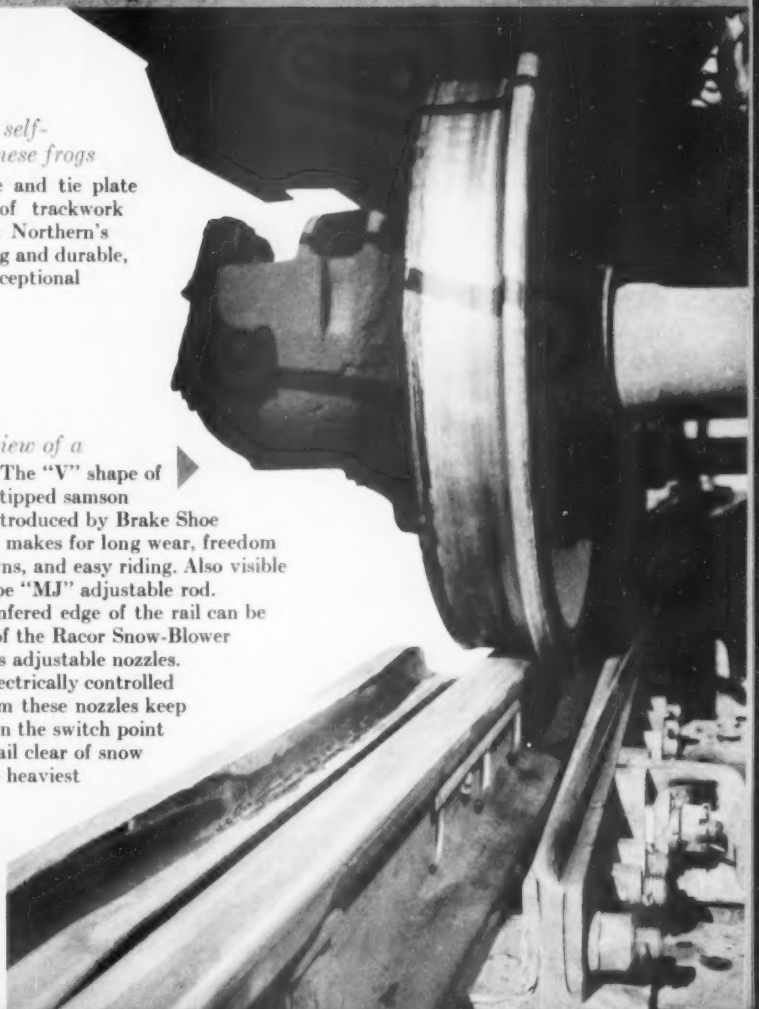
Snow-Blower electric control panel automatically controls cycling of Snow-Blowers. It can be set to average conditions or individually adjusted.



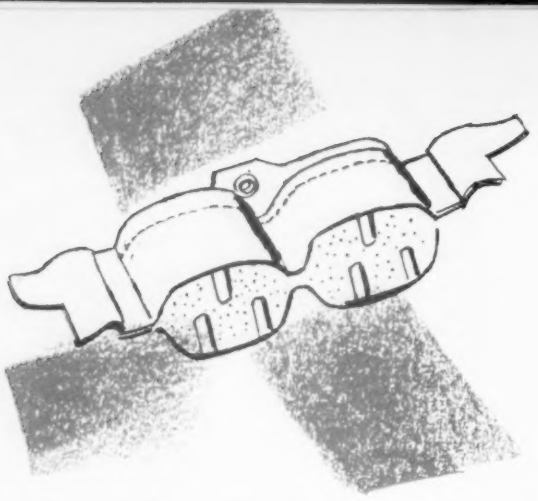
Racor security adjustable rail braces afford maximum bracing of stock rail, simple installation, and provision for adjustment to take up wear.

Classification area has four groups of tracks into which cars are automatically switched through five Racor lap turnouts. These provide maximum separation of cars in a minimum of space. Everything possible to save time and money was accomplished by Brake Shoe during the fabrication of the many turnouts in the yard, including predrilling of stock rails and bending and curving stock and closure rails and match-marking material wherever practical.

Massive, Racor self-guarded manganese frogs with integral base and tie plate indicate quality of trackwork used in the Great Northern's Gavin Yard. Strong and durable, they have an exceptional service life.



Wheel's eye view of a switch point. The "V" shape of the manganese-tipped samson switch point, introduced by Brake Shoe in this country, makes for long wear, freedom from break-downs, and easy riding. Also visible is the Racor type "MJ" adjustable rod. Under the chamfered edge of the rail can be seen a portion of the Racor Snow-Blower manifold and its adjustable nozzles. Intermittent, electrically controlled blasts of air from these nozzles keep the area between the switch point and the stock rail clear of snow during even the heaviest prairie storms.



Is it simple?

Almost invariably, good design is simple design. Redipak Twin lubricating pads have no moving parts, no metal springs, no complicated gadgetry to wear out or break up. Just two simple foam neoprene cores encased in a sturdy cotton wicking cover.

Is it easy to install?

Does the proposed journal box lubricator take a trained engineer, a husky car-knocker, a twenty-ton jack and special tools for installation? Or can it be easily inserted, by any yard man, without tools? Redipak Twin lubricating pads can.

What to look for when

See How Redipak®

Is it thoroughly tested?

Redipak Twin lubricating pads have been rigorously tested and proven in one of the world's most modern journal bearing laboratories. Thousands of miles of road service are bearing out the accuracy of our testing.

Is it economical?

Due to their simplicity, Redipak Twin pads are inherently economical. Their greatest economy, of course, lies in their year-after-year savings in maintenance expenses.

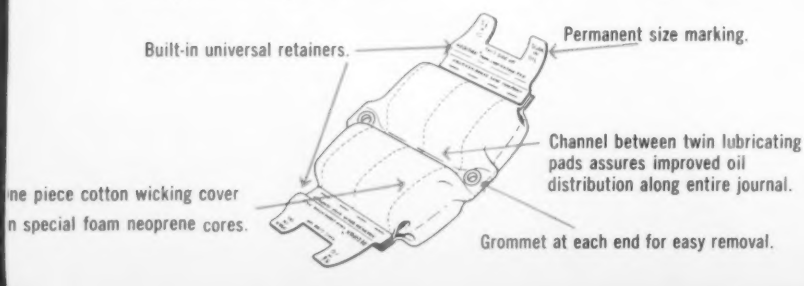
Is it durable?

In many tests, Redipak Twin pads have operated over 100,000 miles without noticeable wear or any sign of glazing. The covers do not lint.

Is it resilient?

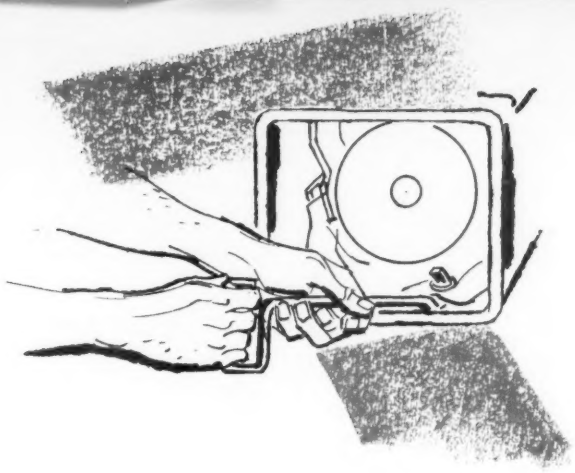
A successful lubricator must contact the journal at all times. Specially molded foam neoprene cores, compounded to our own specifications, assure superior resilience in every Redipak Twin pad.

Only Redipak® Twin Lubricating Pads Meet All These Vital Requirements!


Built-in universal retainers.
Permanent size marking.
Channel between twin lubricating pads assures improved oil distribution along entire journal.
ne piece cotton wicking cover
n special foam neoprene cores.
Grommet at each end for easy removal.

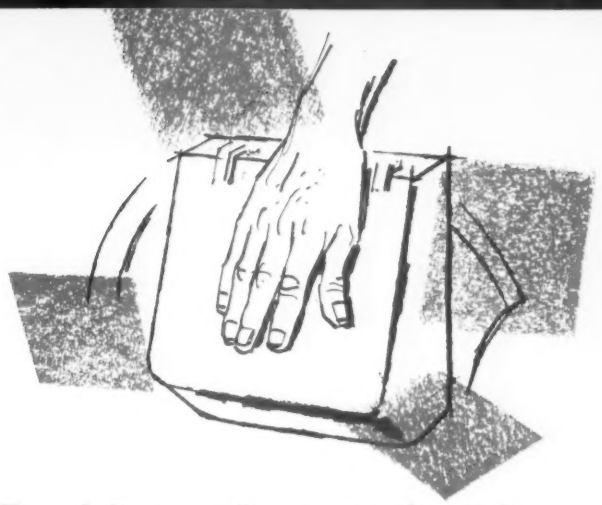
And in addition, Redipak Twin pads feature built-in universal retainers, which prevent shifting due to vibration and shock.

The more lubricating devices you test, the more you will agree with more and more roads: that the Redipak Twin pad is a practical, economical answer to the hot-box problem.



Is it easy to remove?

Can you remove the lubricating device readily, without bending it out of shape, breaking pieces off, or tearing it apart? With the Redipak Twin pad, you just hook the sturdy grommet on the side nearest you, rock it once or twice, and pull it out.



Is it cool running?

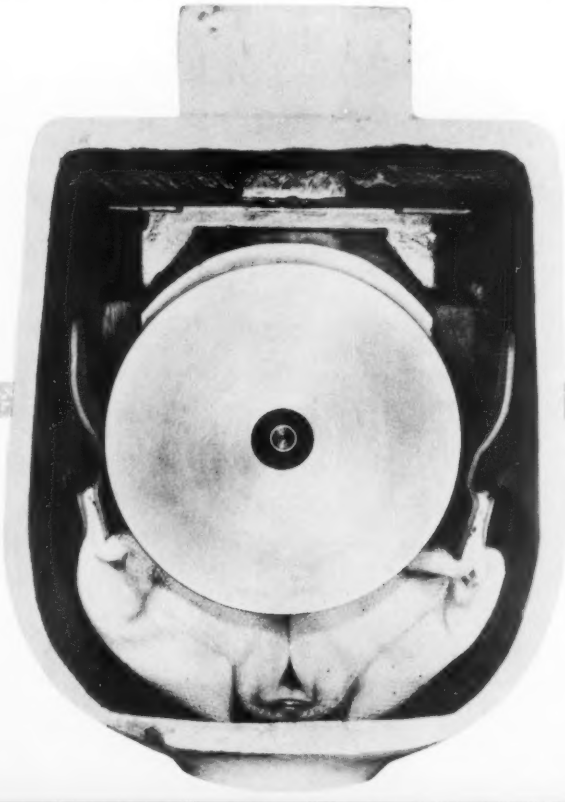
Bearings with Redipak Twin lubricating pads have operated as much as 50°F. cooler than waste-lubricated bearings under identical conditions. This cool-running characteristic and superior wicking action go a long way toward preventing hot boxes.

you test lubricating pads . . .

Twin Pads Measure Up!

Here are the important things you should look for in a lubricating pad—the vital characteristics that are so necessary to good journal bearing operation.

Check them and you will see why Redipak Twin lubricating pads are your best buy and your best bet for controlling the hot-box problem.



Does it hold enough oil?

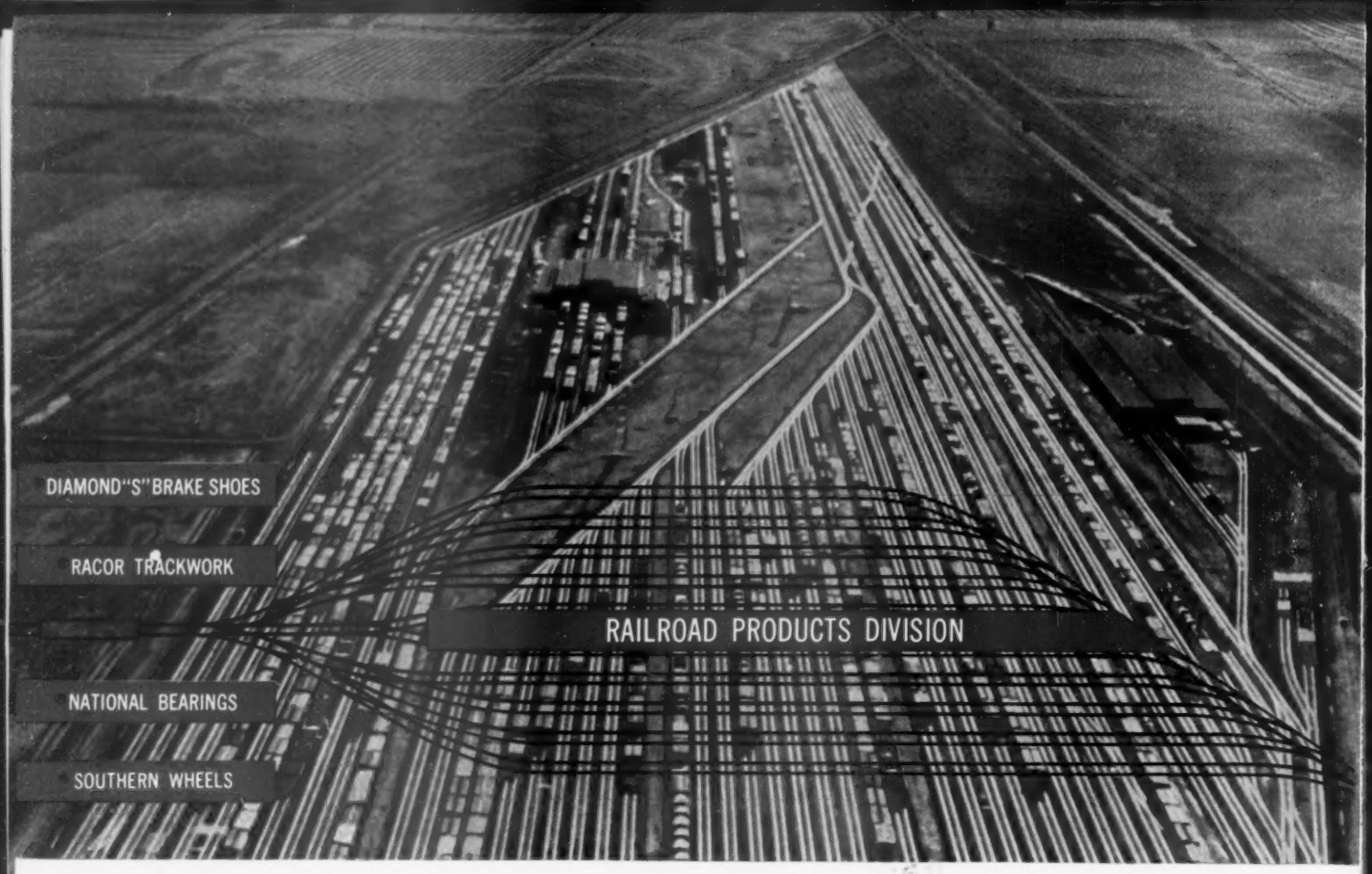
See How Much Oil Redipak Pads Soak Up!

Size	Weight	
	DRY	SATURATED
4¼ x 8	1 lb. 5 oz.	3 lb.
5 x 9	1 lb. 10 oz.	4 lb.
5½ x 10	1 lb. 15 oz.	5 lb.
6 x 11	2 lb. 6 oz.	6 lb.
6½ x 12	2 lb. 12 oz.	7 lb.

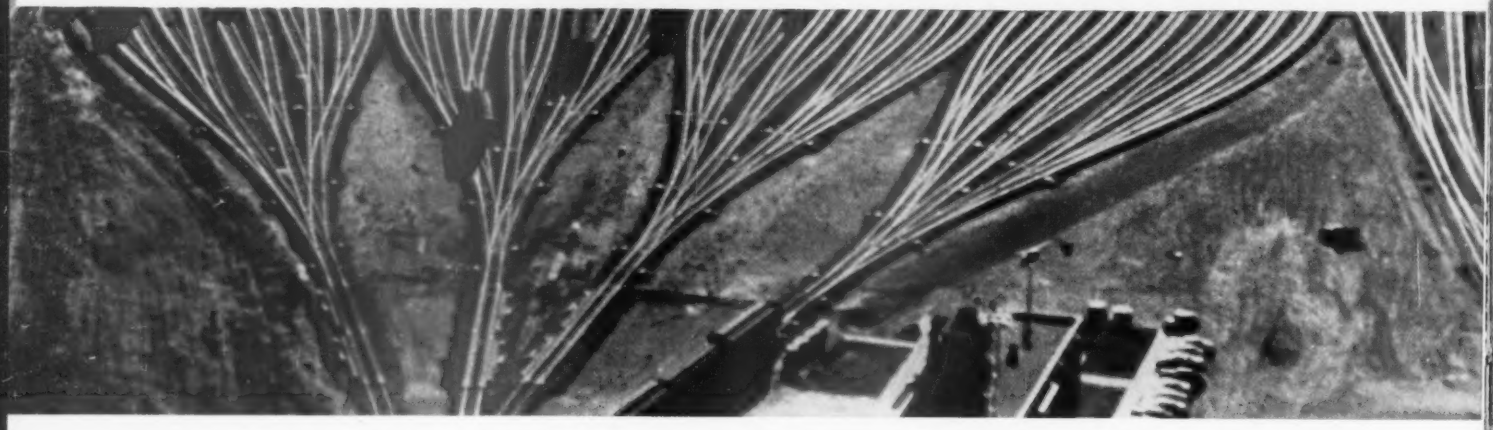
AMERICAN **Brake Shoe** COMPANY

RAILROAD PRODUCTS DIVISION

530 Fifth Avenue • New York 36, N. Y.



four famous names coupled in one consist !



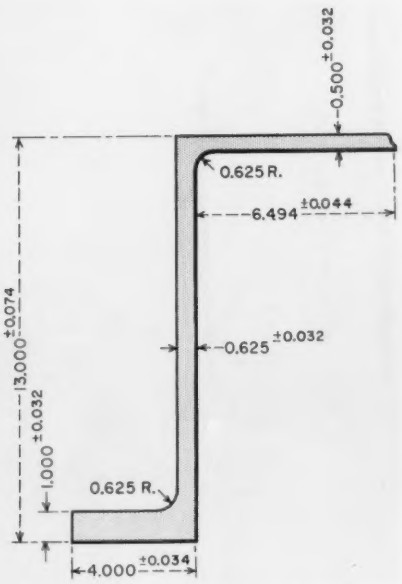
One unit: four famous names have been unified to form Brake Shoe's Railroad Products Division.

Coupled together are the many years of manufacturing experience, the painstaking research, the advanced engineering that have gone into each of the famous product names, Diamond "S" Brake Shoes, Ramapo Trackwork, National Bearings, Southern Wheels.

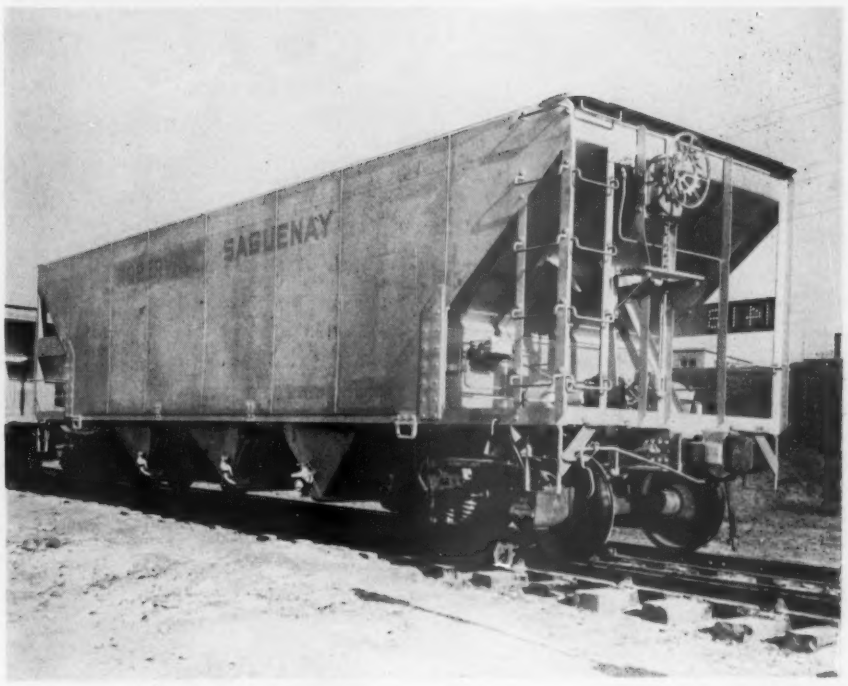
Result? A unified, single source ready to bring its massed abilities to bear on *your* problems . . . to help you in your efforts toward better railroading.

AMERICAN Brake Shoe COMPANY

RAILROAD PRODUCTS DIVISION
530 Fifth Avenue, New York 36, N. Y.



CENTER SILL section of Alcan 65S-T6 aluminum alloy has an area of 14.8 sq. in.



ALUMINUM from trucks up, this car weighs 32,500 lb; load limit is 177,500 lb.►

Now Canadian durability tests . . .

OK Aluminum for Center Sills

Thirty all-welded, open-top, aluminum hoppers recently delivered to the Roberval & Saguenay in northern Quebec have raised the road's ownership to 149 aluminum cars. The 148 aluminum hoppers in this fleet are usually engaged in a bauxite movement from Port Alfred, Que., to the smelter of the Aluminum Company of Canada at Arvida, Que., 26 miles. Alcan and the R&S are properties of Canada's Aluminium Limited.

The big departure in the design of the newest hoppers is the extruded aluminum Z-sections in the center sill. Previously even the Roberval & Saguenay had not used aluminum center sills for its hopper cars; but the Alcan subsidiary in Jamaica got 16 covered hoppers with this same sill late last year. The sill is similar to the standard steel AAR center sill section, and according to calculations and tests conducted by Alcan, fully complies with AAR strength requirements.

These new cars were built by the Dominion works of Canadian Car & Foundry. The builder used the same jigs regularly utilized for the highspeed welding of steel cars. Aluminum welding technology has made big strides forward since 1950. Satisfactory welds can be made at high speeds with either hand or machine methods using Alcan's inert metal arc (IMA) process. In this process, the electrode is the filler wire and the arc is shielded by an inert gas such as argon.

Sheet Aluminum Sides

The structural sections used in these cars are Alcan 65S-T6, a heat-treatable magnesium silicide alloy (US relevant alloy is 6061). The plates and sheets in the cars are Alcan B54S-H11, a non-heat-treatable alloy containing 4.5% magnesium (In the US, alloy is 5083). Supplied annealed, this material does not lose strength when welded. In designing the center sill, the weld area and the heat-affected zone in the 65S-T6 extrusions were not included in the effective net area.

At Cancar's Dominion plant, the automatic welding jigs were fitted with the IMA equipment. The sides of the cars are made up of sheets approximately 60 in. wide joined by vertical welds approximately 8-ft long. This job was done on jigs normally used for welding steel car floors. Other automatic jigs were used for assembling the side sill and side plate to the completed side sheets. The remainder of the car was hand-welded also using the IMA equipment.

The angle of repose of bauxite is 35-deg and the slope sheets in these cars is 40-deg. Side frame construction of conventional steel hopper cars usually places vertical stiffeners at about 3-ft 6-in. intervals. Wider spacing generally is not used because of panel flexing and loss of paint which becomes a more serious problem with wider unstiffened sheets. The 5/16-in. thick sides of these aluminum hoppers have only two T-section side posts between the bolsters and these are spaced on approximately 8-ft centers. The sides are topped with a special box-type aluminum alloy side plate and a heavy aluminum extrusion is used for side sill.

An almost duplicate series of aluminum-body cars built two years ago weighed 36,600 lb with steel center sills, crossbearers, and bolsters. All of these parts are aluminum alloy in the newest R&S hoppers and as a result the total weight of the 1957 cars is reduced to

(*Continued on page 41*)

ENLARGED PIER 15 (right) is the newest addition to C&O's coal handling facilities at Newport News, Va. Left side of pier, where expansion took place, now has a capacity of 2,000 tons an hour, and has been operating 24 hours a day since January 20.

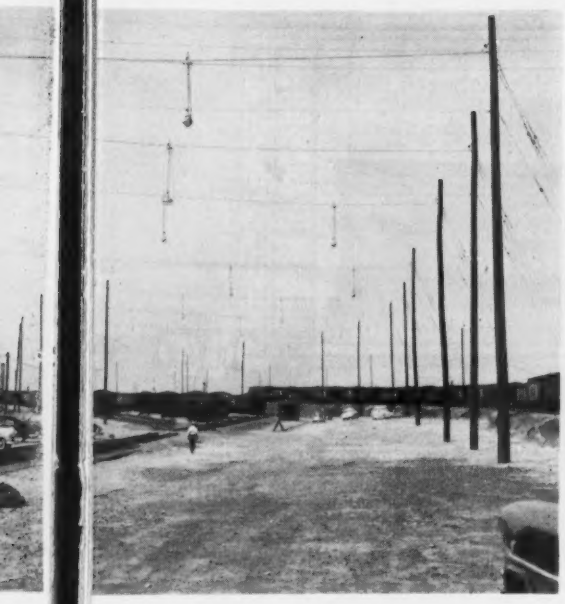
NIGHT ILLUMINATION was carefully planned so that all areas through which moving cars pass are well lighted with the latest type of mercury-vapor lights, individually mounted and efficiently spaced.

Dumper

Spurred by overseas sales, the U.S. coal industry has increased its production capacity 28% in the past two years, and expects a further increase in the years to come. To match this development the Chesapeake & Ohio is enlarging its capacity to handle coal. The road's latest coal facility is the new car dumper at Newport News, Va., for transferring coal from cars to ships. It has a capacity of over 2,000 tons per hour, and currently averages about 1,480 net tons per hour, 24 hours a day, seven days a week.

The new dumper, an addition to the road's Pier 15, cost about $3½ million. Under the general direction of M. I. Dunn, vice-president operation, C&O engineers designed the dumper to handle any size of coal up to 24-in. lumps with minimum breakage. This is achieved by preventing the coal from falling as it leaves the conveyors or the telescopic chute and the rotating trimming machine by which it is stowed in the holds of ships. R. C. Tench, materials handling engineer, supervised development of the adjustable-speed trimming machine. A hydraulically operated gate at the bottom of the chute retains the coal so it flows but does not fall.

The empty yards serving the pier are equipped with retarders and power switches, controlled from one tower, where the operator regulates the speed of empty cars returning to the yards from the "kick back" trestle.



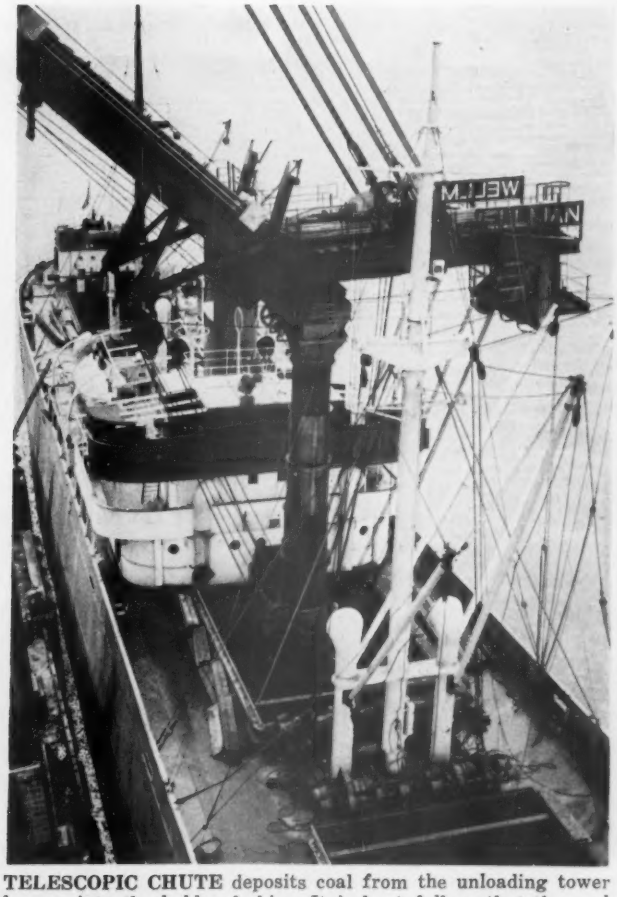
LOADED CARS are drawn out of the pier yard as required to produce the mixture of coal desired by the transshippers. Men ride the cars so they can be stopped for weighing on this track scale and for stopping the cars on the barney pit.

PUSHER, electrically operated, pushes the cars up incline to a rotary dumper where they are emptied. The next loaded car pushes the empty off the dumper and onto a "kick-back" trestle.

FEEDER BELTS carry the coal from the dumping hopper to this main pier belt. The latter has controls for varying the speed so as to automatically keep the tower hopper full.

Gives Export Coal a 'Cushion Ride'

MAIN PIER BELT elevates the coal to the tower hopper. It is covered for protection from the weather and also has a steel-grating walk adjacent to it for the use of maintenance men.

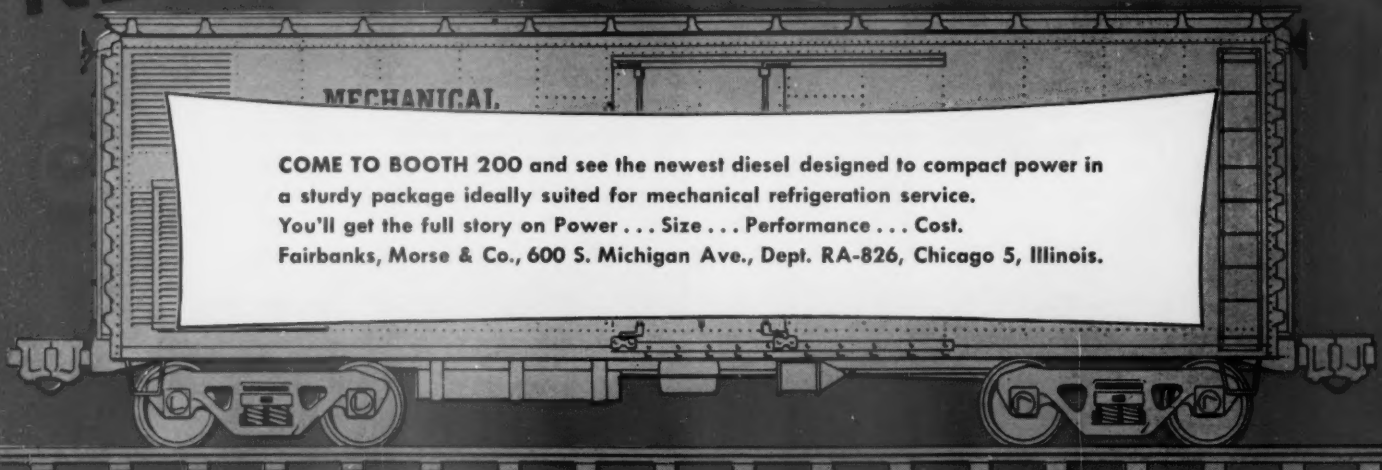


TELESCOPIC CHUTE deposits coal from the unloading tower hopper into the holds of ships. It is kept full so that the coal flows rather than falls into the holds, eliminating breakage.

NEW

NEW

NEW



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You'll get the full story on Power . . . Size . . . Performance . . . Cost.
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(*Continued from page 37*)
32,500 lb. Still of steel construction are the bolster center braces, strikers, center plates, hopper door frames, hopper door hardware, wheels, axles, trucks and brake equipment.

Tests run on one of the 28 cars built in 1955 with the steel underframe showed the aluminum alloy body capable of absorbing impacts of nearly one million pounds. These forces were generated at impact speeds up to 15.4 mph, and a series of 74 impact tests were made. The AAR-type aluminum-alloy center sill was thoroughly tested under one of the Alumina Jamaica covered hoppers at the same time and it is anticipated that the combination of these elements should produce cars satisfactory in every way for the Roberval & Saguenay service.

The choice of aluminum cars for the R&S is one which the railroad's officers estimate will produce a return of 16% or better on the additional first cost. With its guaranteed bauxite movement, the problem was simply one of providing additional cars with a total capacity of 5,325,000 lb. The choice lay between 30 aluminum cars with a light weight of 32,500 lb each and a capacity of 89 tons, or 33 steel cars with a capacity of 81 tons.

The railroad introduced corrosion resistance, lower maintenance costs and longer car life into its calculations. The reduction in the number of cars and a reduction in switching and locomotive fuel costs also were part of the determination. Based on all of these factors, the decision was for 30 aluminum hoppers.

LI Blends Paint—Public Relations

Few suburban passenger stations are models of color-conditioned harmony simply because most railroads have long-established color schemes they use year in and year out. Periodically, stations needing a face-lifting get an application of the same traditional colors.

Until recently, commuters on the Long Island were accustomed to a green and cream combination. Early this year, the railroad, with a sharp eye on passenger approval, decided to break with tradition and let commuters select their own colors. For less than $5 worth of stationery and postage, the line sent letters to mayors and chambers of commerce in the 17 communities on its 1957 painting program, inviting them to sound out townspeople on color preferences.

The reaction was unexpectedly successful—countless columns of favorable stories and editorial comment, not only in New York and Long Island papers, but across the country. Some high lights of the campaign:

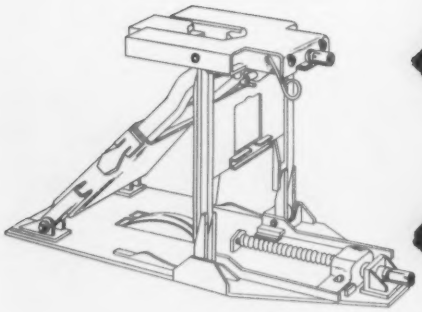
- The Hempstead Chamber of Commerce went all-out, retained a color consultant to work out suggested schemes. Color samples posted in the station and three local banks produced 2,400 ballots, with a three-way tan, yellow and light blue winning out.
- The Wantagh Citizen front-paged the story for weeks, ran two editorials on the program, collected ballots, wound up with barn-red and white as the local preference.
- The Amityville Garden Club, making the choice for the village, also offered to plant and tend flowers in window boxes if the railroad would install the boxes. (The LI accepted.)
- Other papers and groups conducted a variety of promotions and "elections."

So widespread was public interest that communities not on the 1957 painting schedule barraged the road with calls and letters asking to be allowed to pick colors for their station when repainting time came around.

The campaign appears to have unlimited mileage and the Long Island, not unexpectedly, plans to follow a similar views-on-hues program for its color-conscious commuters during the next several years. Since it takes the same number of gallons to paint a station in the new pick-a-color way as it does the old way, it's a safe bet the road won't return to the old way. As President Thomas M. Goodfellow says, "I believe we've succeeded in planting a perennial which will continue to give virtually all of our passengers and neighbors a definite feeling of having a voice in how their railroad is run." And that's grass roots public relations.

CUSTOMERS' COLOR selections were applied at this LI station by Thomas M. Goodfellow (left), LI president, and Mayor William O. Gulde of Hempstead, while William C. Rege, president of the Hempstead Chamber of Commerce stirs a bucket of paint. It was just an act, though; regular railroad paint crews finished the job.

the acf retractable trailer-hitch



provides speed, safety and lading protection

FAST, SIMPLE, SAFE LOADING AND UNLOADING. Hitch retracts to a height of 8 inches. One man raises and locks hitch in less than 3 minutes, using only an air or electric portable power wrench. There's no need to get underneath the trailer—hitch is thus safer to use.

TRAILER AND LADING PROTECTION. Tie-down is secure, around the sharpest curves. And the ACF Retractable Trailer-Hitch has 40,000 foot-pounds of cushioning—more than any standard freight car!—for extra protection in interchange.

CAN BE INSTALLED ON YOUR PRESENT EQUIPMENT or on your order for ACF flat cars. The ACF Retractable Trailer-Hitch can be used with any standard trailer!

LOW INITIAL COST. Maximum claim prevention and a high return in savings on *labor*.

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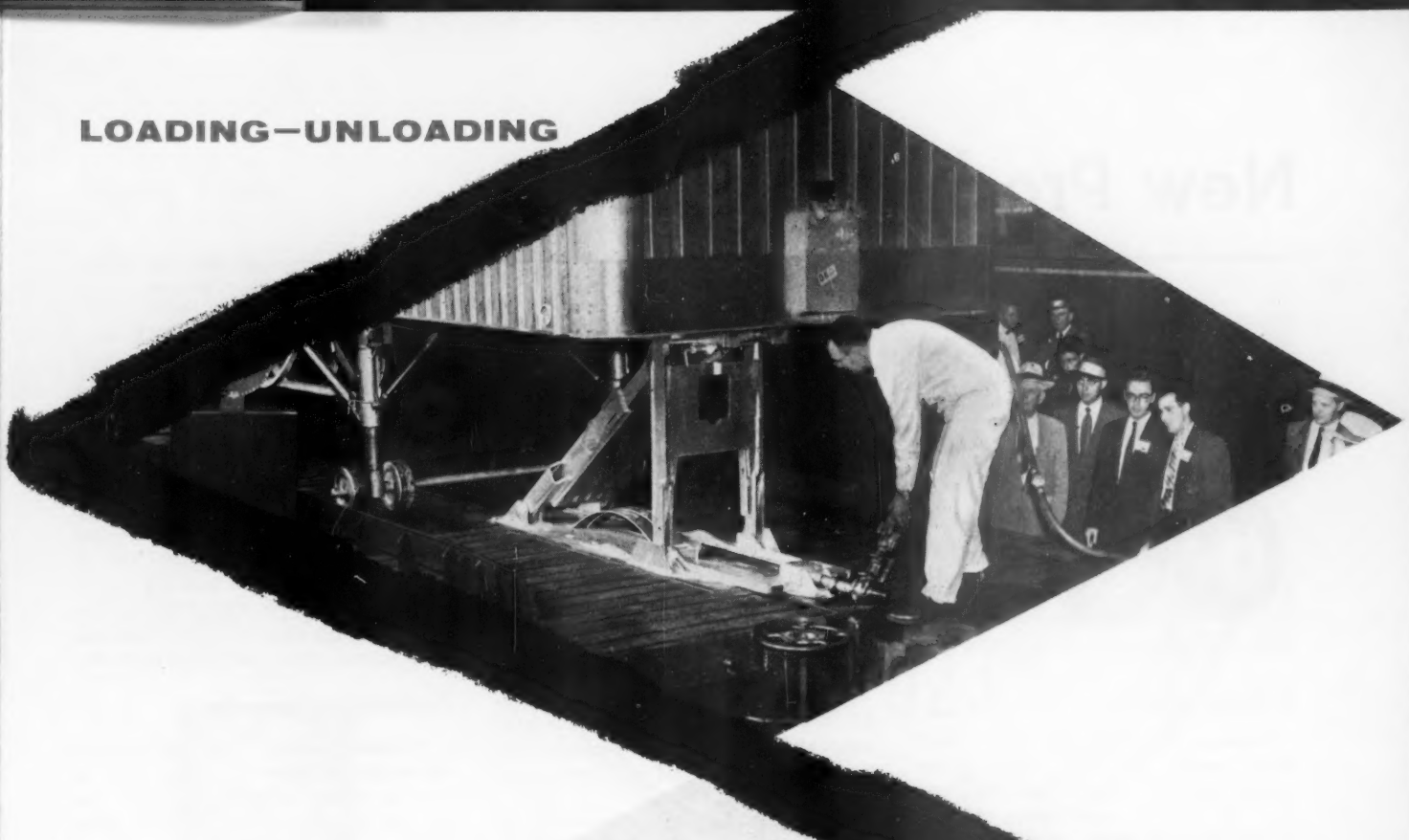
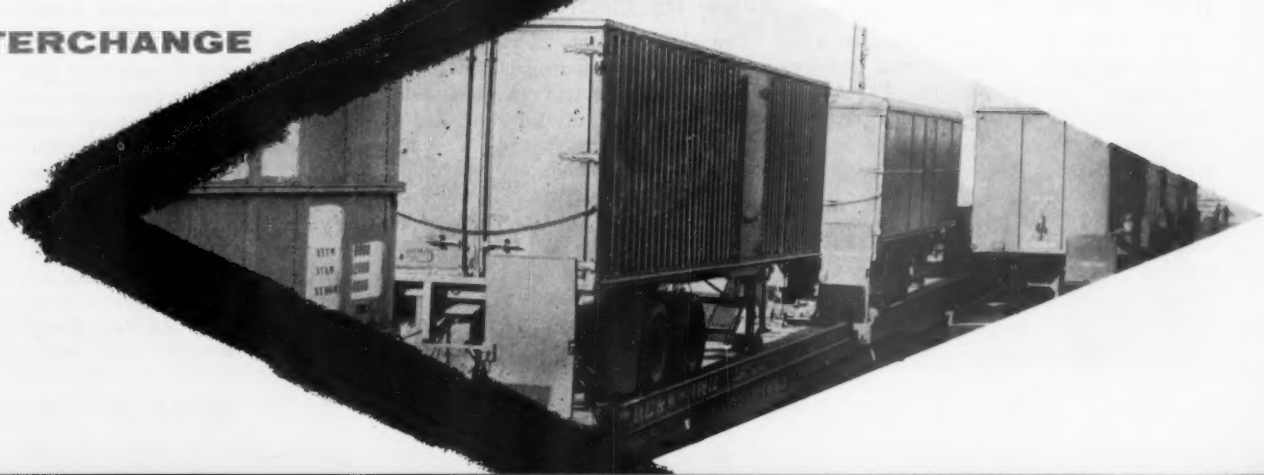
LOADING—UNLOADING

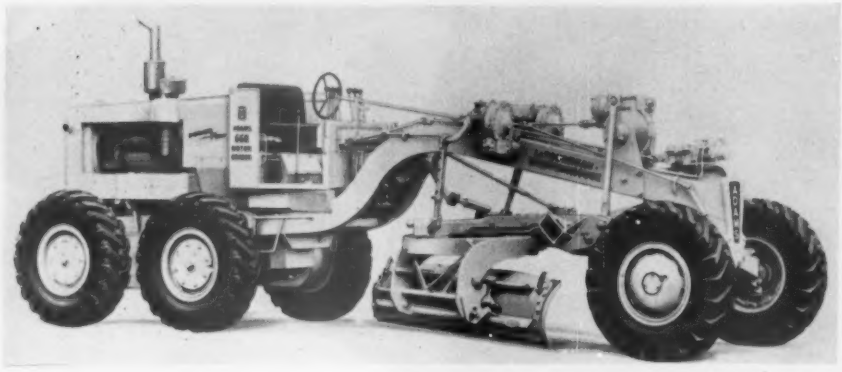


IN TRANSIT

INTERCHANGE



New Products Report



▲ Motor Grader

A torque converter model of the "660" motor grader has been added to the Adams line. The Adams Power-Flow 660 has basically the same design features as the standard model, with the operational advantages of the torque converter drive train plus a 27 per cent increase in engine power. The grader incorporates a 190-hp diesel power plant with a single-torque-converter and four-range transmission. The drive system provides an infinite number of gear ratios which adjust automatically to load variations.

Contributing to the speed and ease of handling of the new grader is a mechanism which allows the operator to change from forward to reverse, and vice versa, without hand shifting.

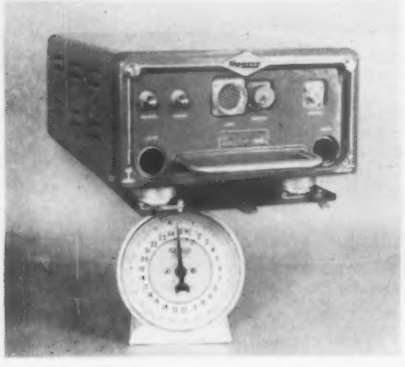
The new grader also incorporates a tail shaft governor which automatically adjusts engine speed. Using it, the operator can set the speed at which he chooses to work by hand throttle or foot accelerator, then forget further manual throttle manipulation. The governor automatically measures requirements of varying resistance, load and grade. *LeTourneau-Westinghouse Company, Dept. RA, Peoria, Ill.* •

Turbocharger for Tractors

Reduction in engine horsepower caused by operation at high altitudes can now be eliminated on the Caterpillar D8 tractor by a new Normalizing Kit. The kit, which consists of a turbocharger and all manifolds and adaptors needed to mount it to the engine, overcomes the cause of high altitude power loss—insufficient oxygen to permit complete combustion. The kit does not increase the sea level horsepower of the tractor, but provides oxygen to burn the fuel at high altitudes. *Caterpillar Tractor Company, Dept. RA, Peoria, Ill.* •

Conference Recorder

"Walkie-Recordall," a new, self-powered, lightweight recorder-transcriber, can be used as a desk-type recorder; it may also be used to record from inside a closed briefcase. The machine will record from 1½ to 4 hours on each side of a "Sonaband"; the recording is permanent and unalterable, may be identified, indexed, filed or mailed. The device has voice-actuation start-stop control, to eliminate recording of silent periods. *Miles Reproducer Company, Dept. RA, 812 Broadway, New York 3* •



Single Package Radio

This single unit railroad radio meets AAR specifications, weighs less than 25 lb, and requires little power. The 117-volt power supply utilizes silicon bridge rectifiers for high efficiency, less heat and long life. This entire power supply weighs less than 9 lb. Replacement of power supply converts unit to different voltage operation, without internal wiring changes. Other features include front panel metering for testing and separate plug-in units. *Sperry Rail Service, Division of Sperry Products, Inc., Dept. RA, Danbury, Conn.* •

Power for Electro Magnets

The electric plant shown is designed especially for electric magnet operation. It is a d-c air-cooled unit which is said to provide ample capacity for 39-in. and 45-in. magnets. Dimensions and weight have been kept to a minimum and the compact design of the plant permits ready installation on cranes of all sizes. The generator is a 7.5-kw, 230-volt d-c, 4-pole unit with compound winding. Power is supplied by a short stroke, air-cooled, 4-cycle engine, developing 20 hp at 2,400 rpm. *Kohler Company, Dept. RA, Kohler, Wis.* •

Quartz Tube Light Source

The 1,500-watt tubular mercury quartz lamp shown is a completely new development for lighting large areas, and is made to operate in a special luminaire for illuminating outdoor areas such as station parking lots, fueling stations, outdoor storage and construction areas, railroad yards, and other situations where high mounting is a requirement. It can also be used indoors in industrial high-bay areas. *General Electric Company, Lamp Division, Dept. RA, Nela Park, Cleveland 12, Ohio* •

Supply Trade

Elmer B. Ott, senior vice-president of **Ray-O-Vac Company,** has been elected president, succeeding **Donald W. Tyrell,** who resigned the presidency but will continue as board chairman.

Dick Mosher, sales engineer for **Aeroquip Corporation,** at Burbank, Cal., has been appointed industrial sales manager for **General Logistics,** Pasadena, Cal., a subsidiary of Aeroquip.

J. A. Walker has been appointed area sales manager for the newly created transportation and maintenance sales area in the Chicago district of **Westinghouse Electric Corporation.** Mr. Walker will be responsible for the sale of Westinghouse electrical equipment to railroads and railroad suppliers and for the sale of maintenance services on electrical equipment for the company's Chicago repair shop.

R. G. Hudson, works manager of the Lachine, Que. plant of **Standard Railway Equipment Manufacturing Company (Canada) Ltd.,** has been appointed vice-president, succeeding **J. C. Lessard,** resigned.

Harry R. Bartel

Harry R. Bartel, assistant vice-president—sales, **General Steel Casting Co.,** will retire September 1 after 41 years' service. Coming from the New York Central, Mr. Bartel joined Commonwealth Steel Co., a predecessor of GSC, in 1916. He served in the engineering department before transferring to sales work. From 1931 to 1947 he was manager of Western District sales for GSC.

Mr. Bartel will establish offices in St. Louis as a manufacturers representative after September 1.

A. L. Dassler, assistant chief engineer of Koehring Division, **Koehring Company,** has been promoted to chief engineer.

George S. Smith has joined the **Dayton Rubber Company's** railway division, as sales engineer, covering the Minneapolis territory.

Henry P. Lockhart has been appointed assistant general manager of **Austin-Western, Construction Equipment Division, Baldwin-Lima-Hamilton Corporation.** He has served in various sales and managerial capacities with Austin-Western and in addition to his other duties will coordinate overall sales, service and advertising activities.

John W. Slattery, midwest supervisor, stainless steel sales, **Crucible Steel Company of America,** at Chicago, has been made general supervisor, stainless steel field sales, Pittsburgh.

G. Gilbert Thorne has joined the **Dolphin Paint & Varnish Co.** as sales manager, succeeding **Marion Winkle,** who will remain with the company as a consultant.

Automatic Electric Company and affiliated companies in Chicago have moved to a new factory, general office and research and technical center in Northlake, Ill., a suburb of Chicago.

Curtis C. Drake, Denver sales representative of **Griffin Wheel Company,** retired June 30.

Here's How Free Daylight Is Saving One Company $58,023.00

SEND FOR YOUR FREE COPY

This lighting cost analysis by an independent consulting engineer reveals the money actually being saved in one metal building through the use of Corrulux daylighting panels in place of artificial lighting. Comparative costs of both methods are projected over a ten-year period, indicating a savings with Corrulux, of over $58,000.00.

Similar savings are possible in your construction picture.

Write for your copy of this important analysis today. **On your letterhead, please.**

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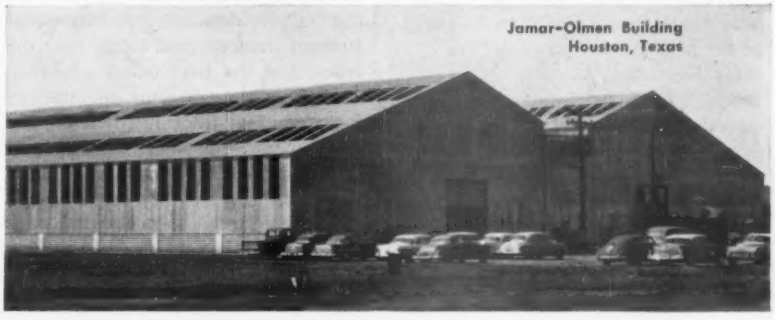

Jamar-Olmen Building
Houston, Texas

Current Publications

BOOKS

THE DYNAMICS OF CAPITALISM; CORRECTIVES TOWARD CONTINUOUS GROWTH, by Julius T. Wendzel. Harper & Brothers, 49 E. 33rd st., New York 16. $3.50.

Dr. Wendzel outlines changes in attitudes and policies he believes necessary if the American economic system is to deliver the total product and standard of living of which it is inherently capable.

Tracing the linkage between owners of capital and the enterprisers who provide new business ideas, he maintains that men of business imagination must have access to adequate capital at all times. He attributes the unusual growth, power and productivity of capitalism to its freedoms, the leadership of dynamic enterprisers, and a financial mechanism which, when working smoothly, gives enterprisers access to far more capital than they could personally own. He sees coordinated redevelopment of financial policies and institutions pertaining to private and public credit as a major necessity for achieving harmonious expansion and for avoiding the extremes of boom and depression.

•

INDUSTRIAL ECONOMIC BLUEPRINT, 600 pages, maps, charts, illustrations. Chicago & Eastern Illinois Railroad, Dept. RA, 332 S. Michigan Ave., Chicago 4, Ill.

C&EI's industrial report, in preparation for several years, offers a complete survey of business and manufacturing opportunity in the Chicago-Chicago-Heights area. Factors covered by the report include transportation, population, industries, raw material and business services. Data are presented also on local government, taxes and services available for the Chicago Heights area.

•

FROM THE MANUFACTURERS

CATALOG CR-510-G. 8 pages. International Harvester Company, Construction Equipment Division, Dept. RA, 180 N. Michigan ave., Chicago 1. Free.

This catalog on IHC's new increased horsepower line of 4-cyl carbureted power units reserves a page of space for valuable data on each of the four heavy-duty dependable units. An informative line graph, illustrating power and fuel consumption curves, provides a useful ready reference on each unit. The pamphlet discloses that each unit except the smallest, which is gasoline powered, is available for operation on LPG, natural gas, kerosene, distillate, or gasoline, as fuel. Dimensions and brief specifications are included.

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PAMPHLETS

NIGHT TRICK ON THE NORFOLK AND WESTERN RAILWAY. 18 pages. N&W Magazine and Advertising Department, Roanoke, Va. Railroad enthusiasts may obtain single copies without charge.

A collection of 18 pictures of after-dark steam operations with short text about the railway's scope and services. "Dedicated to railfans everywhere," the pictures, taken by O. Winston Link, a New York industrial photographer, vary from a coal train passing a drive-in theatre to a roundhouse shot of an 1897 locomotive.

•

CHARACTERISTICS OF HIGHWAY FREIGHT TRANSPORTATION IN TEXAS, by J. Nelson Slater. 68 pages, illustrations, charts, tables. Bulletin 5. Texas Transportation Institute, Texas A&M College System, College Station, Tex.

This report, a cooperative research project by the Texas Highway Department and the Texas A&M College System, describes some characteristics of intercity trucking that are significant in transport economies. The investigation was based on data recorded during 1955 at the 21 "loadometer" stations operated by the Highway Planning Survey of the Texas Highway Department. Information available for analysis covered some 19,000 trips by trucks and truck combinations on main rural roads.

The need for finding a better measurement of highway freight hauling has increased with the growth of this mode of transport. The study reported here was an attempt to gain new information about certain basic economic characteristics of intercity trucking, using as source material the field records and punched cards containing observations made at weighing stations.

•

GROUNDING OF PORTABLE ELECTRICAL EQUIPMENT, Data Sheet D-299, National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

Several suggestions about safe use of portable electrical devices are included in this data sheet.

How Earthquakes Report Themselves

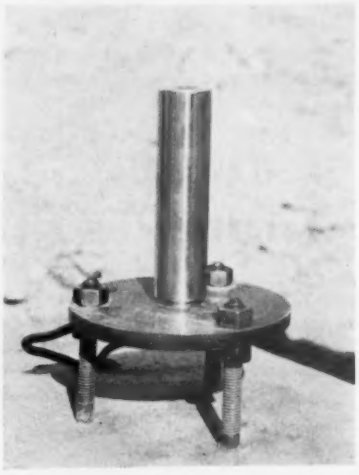
Earthquake tremors have been noticed from time to time in the area of Niland, Cal. Although no damage to Southern Pacific tracks or structures has resulted recently, it has seemed desirable to know the intensity of tremors that may occur, so signal maintainers or track forces may be sent promptly to possible trouble spots.

The SP signal department recently has designed special equipment to detect and indicate these earthquake tremors. This apparatus, installed at Niland, is connected with the centralized traffic control.

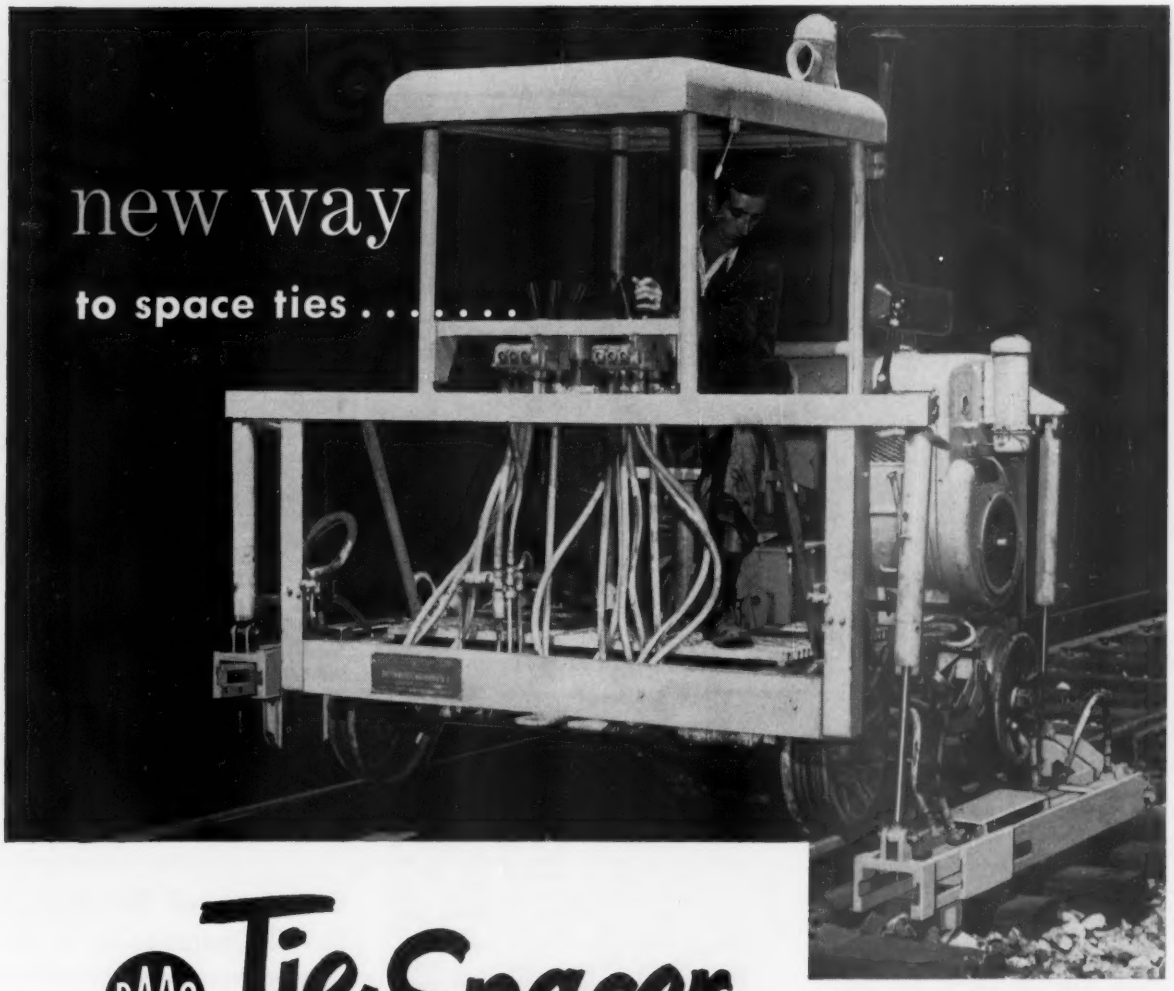
The picture shows one of the 12 units in normal position with a cylindrical steel weight standing on end. The 12 cylinders are all the same diameter, 1½ in., being turned from discarded live shafting. The cylinders range in length from 4½ in. to 6 1/6 in. The bottom of each cylinder is turned to form an extending plug at the center ¼ in. long. The diameters of these plugs range from 1⅜ in. for the shortest cylinder, to 13/16 in. for the longest.

Normally each cylinder stands vertical on its plug. Both the diameter of the plug and the length of the cylinder are factors in determining how much movement of the earth is required to topple over any one cylinder. The weight of the cylinder on the plug normaly closes a contact in an electrical circuit.

The 12 instruments are used experimentally to determine a definite point of reference which may be used in ultimately developing a single instrument which will indicate only such earth shocks as would be expected to cause damage to track and structures.



The foundations, with anchor bolts and base plates, move with the earth tremors. Within the range of the 12 detectors, a mild tremor topples over the tallest detector. A somewhat stronger tremor would topple over the tallest and the next tallest detectors, etc. When any detector operates, an indication is transmitted over the CTC line system to the dispatcher at Beaumont, and he calls the maintainer to inspect the neighborhood of the detectors. If necessary, track forces are called to make sure that track and structures are safe for traffic.



RMC Tie Spacer

Hydraulic shifting devices on both sides of machine may be used independently or together to correct poor spacing and slewed tie conditions. Ties can be moved in either direction parallel to the rail. Shifting devices automatically clamp to the rail when lowered to operating position, taking all forces through the anchorage.

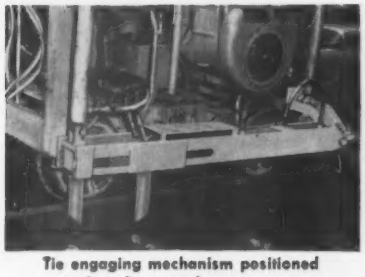
Ask for Bulletin TS-100.

Railway Maintenance Corporation

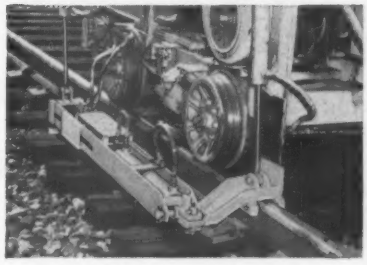
PITTSBURGH 30, PA.

RAILWAY PROGRESS INSTITUTE MEMBER

Trial and LEASE Plans



Tie engaging mechanism positioned over tie to be moved.



Shifting device lowered to operating position, with clamp automatically positioned on rail.

Facts & Figures *at a glance*

Scrap Metal Big RR Business

Seventeen Class I roads earned revenues in excess of $2 million each in scrap metal traffic last year, according to the Institute of Scrap Iron and Steel. Digests of this and other reports from the institute's year book follow:

Railroad Scrap Sales (gr. tons)

	Scrap loco., machine tools, etc.	Scrap	Total
1954	2,857,143	535,714	3,352,857
1955	1,996,389	1,621,523	3,618,293
1956	3,223,291	625,471	3,848,762

Railroad	Carloads	Net Tons	Frt. Revenue
Santa Fe	16,702	712,016	$3,546,905
B&O	55,835	2,573,735	6,842,721
C&O	28,855	1,401,611	3,871,523
C&NW	25,484	1,189,548	3,192,601
Burlington	11,427	945,711	2,021,806
Milwaukee	16,921	762,070	2,476,735
EJ&E	33,878	1,651,644	2,021,992
MoPac	12,744	567,025	2,366,650
NY Central	70,792	3,401,796	10,935,464
Nickel Plate	28,546	1,354,652	3,362,856
New Haven	16,372	709,703	2,490,244
Pennsylvania	129,788	6,062,421	16,980,365
P&LE	38,465	1,880,711	2,525,260
Reading	31,749	1,470,489	2,793,408
Southern	16,732	725,142	2,521,296
SP (Pac. Lines)	30,039	1,293,232	4,299,541
Union Pacific	10,390	455,897	2,172,572

Railroad Traffic in Scrap

	Scrap	Pig Iron	Scrap	Pig Iron
	1955		9 mo. 1956	
Revenue Freight Originated:				
Carloads	549,501	103,450	439,144	78,896
Net Tons	25,580,883	5,962,019	20,249,296	4,580,848
Revenue Freight Terminated:				
Carloads	560,461	103,410	445,594	79,261
Net Tons	26,138,729	5,971,021	20,551,968	4,602,856
Total Traf. incl. Duplications:				
Carloads	820,217	161,384	652,989	121,894
Net Tons	38,043,167	9,271,720	30,031,397	7,015,731
Revenue	$94,533,030	$25,056,073	$80,801,892	$20,452,868
Av. Rev/Net Ton	$2.48	$2.70	$2.69	$2.92

Serviceable Fleet Down

The serviceable freight-car fleet of Class I railroads lost 6,839 cars in July.

The month's installations totaled 6,601 new cars and retirements totaled 6,330 cars, the net gain there having been 271 cars. Meanwhile, however, the bad-order backlog increased by 7,110 cars—from 4.5% of ownership on July 1 to 4.9% on August 1.

These figures were reported by Chairman A. H. Gass of the Car Service Division, Association of American Railroads, in his latest review of "The National Transportation Situation."

The review also showed that the serviceable fleet, as of August 1, included 19,163 more cars than it did a year earlier. The August 1, 1957, total was 1,645,347 cars.

Car-line affiliates of Class I roads installed, in July, 438 new cars and retired 530, for a net loss in ownership of 92 cars.

Detention reports for July indicated that 20.04% of the cars placed in that month were detained beyond the free time. That compared with 20.32% for the previous month and 22.9% in July 1956.

Latest performance data showed that freight cars in May produced an average of 1,023 net ton-miles per serviceable car per day. That compared with 994 for the previous month and May 1956's 1,063.

Fare Applications

HUDSON & MANHATTAN.—Asked the ICC for authority to boost its interstate fares a nickle a ride—from 20 to 25-cents; also asked New Jersey Public Utility Commission and New York Public Service Commission for authority to boost fares a like amount within each state.

Fare Authorizations

BOSTON & MAINE.—ICC approved application to raise its interstate fares by 20-cents a ride beginning September 10, but set maximum increase at 40% above current fares.

Organizations

PACIFIC COAST SHIPPERS ADVISORY BOARD.—Will be addressed by Union Pacific President A. E. Stoddard during September 12-13 meeting at Las Vegas.

NATIONAL PETROLEUM ASSOCIATION.—NPA Department of Traffic and Transportation has completed plans for participation in NPA annual meeting at Atlantic City September 11-13. Taking part in panel discussion of new developments in their fields will be J. P. Krumech, vice-president, sales, Shippers' Car Lines; E. A. Locke, Jr., president, Union Tank Car; G. C. Locke, general counsel, Committee for Oil Pipe Line Companies; Austin Sutherland, managing director, National Tank Truck Carriers; T. M. Thompson, assistant to vice-president, sales, General American Transportation Corp.; and D. A. Wright, president, Lake Tankers.

NATIONAL RAILWAY HISTORICAL SOCIETY.—Tours of Norfolk & Western and Virginian facilities and excursions over their lines feature the annual meeting of the society at Roanoke August 31 to September 1.

Financial Applications

NEW YORK CENTRAL.—To assume liability for $3,555,000 of equipment trust certificates to finance in part the building of 665 hopper cars in Despatch Shops. Estimated total cost of the cars is $4,555,250, the estimated unit cost being $6,850. The certificates would mature in 15 annual installments of $237,000 each, beginning September 16, 1958. They would be sold by competitive bids which would fix the interest rate.

SOUTHERN PACIFIC.—To assume liability for $7,500,000 of equipment trust certificates to finance in part construction, in its own shops, of 551 box cars and 360 gondola cars at estimated unit costs of $9,462 and $11,521, respectively. Estimated total cost of the equipment is $9,377,006. The certificates would mature in 15 annual installments of $500,000 each, begining August 1, 1958. They would be sold by competitive bids which would fix the interest rate.

MISSOURI PACIFIC.—To assume liability for $3,525,000 of equipment trust certificates to finance in part the acquisition of 490 freight cars at an estimated total cost of $4,496,250. The 490 includes 215 box cars and 200 pulpwood cars which would be built in MP shops at estimated unit costs of $7,545 and $9,855, respectively; and 75 Airslide cars which would be purchased from General American Transportation Corporation at an estimated unit cost of $12,041. The certificates would mature in 15 annual installments beginning September 1. They would be sold by competitive bids which would fix the interest rate.

88.2% of Trucks Defective

The second 1957 road check conducted by the ICC's Bureau of Motor Carriers turned up vehicle defects or driver deficiencies on 88.2% of the trucks inspected.

The check was conducted during the week beginning July 8 at 42 points throughout the country. It was confined to interstate trucks; 12,237 vehicles were inspected. More than 18% of them (2,273) were ordered out of service for being "so immediately hazardous to operate as to be likely to cause an accident or breakdown."

The 88.2% defect-or-deficiency figure compares with the 89.9% reported for the previous check conducted in May. The principal violation found in the July check was in the vehicles' braking systems where 7,130 defects were reported. This was followed by deficiencies in driver logs and medical certificates, and lighting defects.

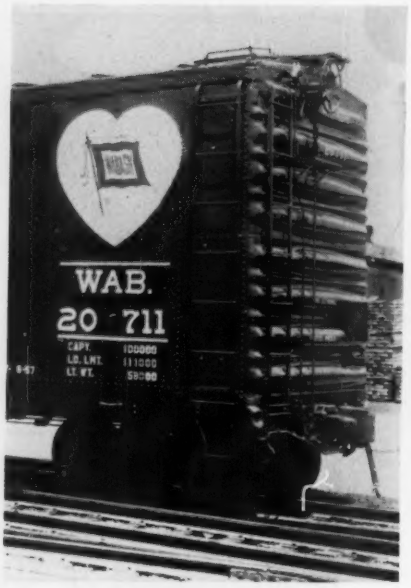
Dividends Declared

CHICAGO, BURLINGTON & QUINCY.—$2, quarterly, payable September 25 to holders of record September 11.

ERIE & PITTSBURGH.—guaranteed, 87½¢, quarterly, payable September 10 to holders of record August 30.

SOUTHERN PACIFIC.—75¢, quarterly, payable September 16 to holders of record August 26.

VIRGINIAN.—new common, initial, 50¢, payable September 13 to holders of record August 30; new 6% preferred, 15¢, quarterly, payable November 1, 1957, February 1, May 1 and August 1, 1958, to holders of record October 17, 1957, January 17, April 16 and July 17, 1958, respectively.



Split Definitive

Not a painter's error or an omitted number—from now on all new or repainted Wabash cars will have identifying numerals split as above. Emphasis is on calling last three digits as a unit, "twenty—seven-eleven," rather than "two-oh-seven-one-oh." Wabash says grouping last three digits greatly speeds checking of cars and preparation of switch lists.

CNR Cornwall Diversion In Full Operation

Full scale operation has begun on the Canadian National's new diversion between Cornwall, Ont., and Cardinal, with the opening of five new stations.

CNR reported that finishing touches on the project were being rushed to completion. The diversion was made necessary by the St. Lawrence Seaway construction.

The new stations, open for passenger, freight, express and telegraph business, are at Cornwall, Long Sault, Ingleside, Morrisburg and Iroquois. They replace old stations at Iroquois, Morrisburg, Aultsville, Farran's Point, Wales, Moulinette, Mille Roches and Cornwall.

Illinois Fare Hike Means $837,000 to 22 Railroads

A 10¼% increase for intra-state passenger fares has been granted to some 22 railroads by the Illinois Commerce Commission. The commission order applies to all trips within the state, except Chicago commuter trips.

The fare hike was estimated to add $824,000 to the revenue of the 14 western roads and $13,000 to the revenue of the eight eastern lines involved (which carry relatively few passengers exclusively between Illinois points).

1956 ROCK ISLAND TOTAL:

6788 Boxcars Upgraded With ADM Freight Liner 810

CASE HISTORY No. 3. The Rock Island Railroad pioneered the use of plastic and fiberglass upgrading and was the first railroad in the country to experiment with any upgrading of this type.

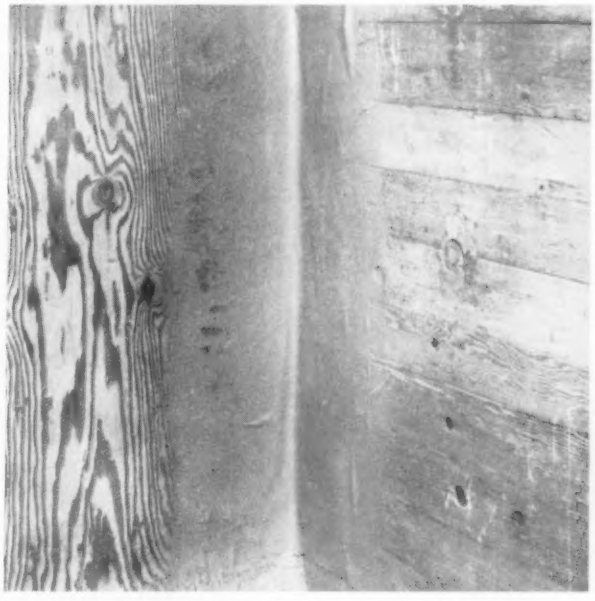
Almost three years ago the Rock Island tested ADM FREIGHT LINER 810. Early results were so encouraging that the line extended the use of this plastic and fiberglass system to include all upgrading jobs.

During 1956 the Rock Island upgraded 6788 cars with ADM FREIGHT LINER 810 at 20 points on their railroad. FREIGHT LINER 810 meets Rock Island requirements, including speed of application, economy, ease of training crews, and consistently trouble-free results.

The Rock Island has been a leader in the testing and use of ADM FREIGHT LINER 810. Today more than a score of other railroads also upgrade with this system.

Find out why the leaders test and adopt this proven method of upgrading. For a demonstration on your own cars at any location, write, wire, or phone (FEderal 3-2112, Minneapolis) ADM FREIGHT LINER SYSTEM, Archer-Daniels-Midland Company, 700 Investors Building, Minneapolis 2, Minnesota. ADM Service engineers provide everything needed to start your yard crew with the FREIGHT LINER SYSTEM of upgrading.

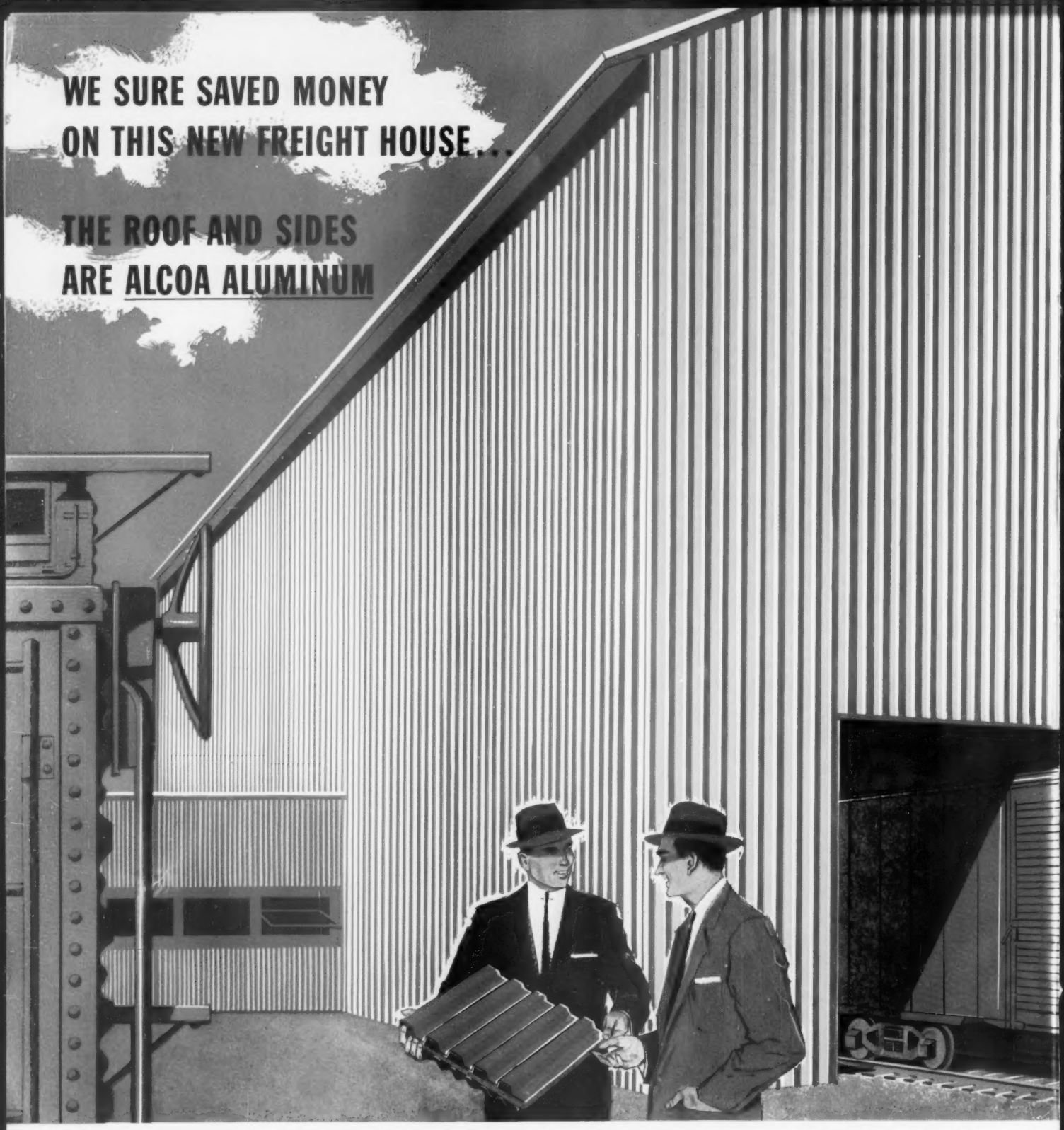
Here is before-and-after evidence of the results you get with ADM Freight Liner 810 in boxcars.



Finished job dries in minutes, provides a smooth, tight interior with top-notch sanitary protection.

Archer-Daniels-Midland

OTHER ADM PRODUCTS: Linseed, Soybean and Marine Oils, Paint Vehicles, Synthetic and Natural Resins, Vinyl Plasticizers, Fatty Acids and Alcohols, Hydrogenated Glycerides, Sperm Oil, Foundry Binders, Industrial Cereals, Vegetable Proteins, Wheat Flour, Dehydrated Alfalfa, Livestock and Poultry Feeds.



Freight houses, maintenance shops, service buildings of all types go up faster at lower cost when you build with Alcoa® Aluminum. Sandwich walls, using Alcoa Aluminum to sheathe a one-inch layer of glass fiber, can be erected for as little as $1.50 per square foot. Yet they provide three times the insulating efficiency of eight-inch masonry!

They save money in other ways, too. Lightweight sandwich walls permit lighter, less costly foundations and framing, take less manpower and equipment to erect. Expensive painting and maintenance are eliminated because aluminum never rusts, never rots. It defies steam, smoke and industrial fumes, can be salvaged after years of use for remodeling or relocation.

Corrugated and V-beam roofing sheet of Alcoa Aluminum are available for *every* type of building, and their corrosion resistance insures long life under severest conditions. Sandwich wall techniques suggest another way to greater savings on roofing, especially on buildings of pitched roof design.

Progressive railroaders are using more and more light, strong, rustproof Alcoa Aluminum—for new lightweight trains, tank cars, boxcar and baggage car doors, crossbucks and wayside signs, freight and passenger stations. Get more information. Write: Aluminum Company of America, 2180-H Alcoa Building, Pittsburgh 19, Pennsylvania.

Write for free literature: Sandwich Walls of Alcoa Aluminum.

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GEARED TO PROGRESS
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MARKET OUTLOOK *at a glance*

Carloadings Climb To 750,640 in Week

Loadings of revenue freight in the week ended August 17 totaled 750,640 cars, the Association of American Railroads announced on August 22. This was an increase of 10,169 cars, or 1.4%, compared with the previous week; a decrease of 19,004 cars, or 2.5%, compared with the corresponding week last year; and a decrease of 25,061 cars, or 3.2%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended August 10 totaled 740,471 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, August 10

District	1957	1956	1955
Eastern	111,932	112,620	122,386
Allegheny	141,070	126,577	150,030
Pocahontas	68,000	64,972	61,337
Southern	118,910	125,803	121,223
Northwestern	127,208	105,389	134,578
Central Western	121,393	122,747	124,447
Southwestern	51,958	57,099	56,250
Total Western Districts	300,559	285,235	315,275
Total All Roads	740,471	715,207	770,251
Commodities:			
Grain and grain products	59,010	54,830	55,118
Livestock	5,076	8,548	6,329
Coal	135,370	133,086	127,142
Coke	11,000	7,721	12,366
Forest Products	41,362	49,321	48,864
Ore	84,831	58,502	82,348
Merchandise l.c.l.	54,672	59,705	65,148
Miscellaneous	349,150	343,494	372,936
August 10	740,471	715,207	770,251
August 3	740,711	660,287	760,387
July 27	736,407	649,806	790,426
July 20	743,359	648,492	781,908
July 13	691,991	619,988	794,138
Cumulative total, 32 weeks	22,029,783	22,701,123	22,426,196

IN CANADA.—Carloadings for the seven-day period ended August 7 totaled 79,203 cars, compared with 132,433 cars for the previous ten-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
August 7, 1957	79,203	30,577
August 7, 1956	88,269	31,273
Cumulative Totals:		
August 7, 1957	2,399,878	1,009,799
August 7, 1956	2,596,823	1,062,298

New Equipment

OVERSEAS

► *India.*—Commissioners, Port of Calcutta, are asking bids for six broad-gage, diesel-hydraulic switchers, according to Foreign Commerce Weekly. Rendel, Palmer & Tritton, 125 Victoria st., Westminister, London, S.W.I., are bidding agents.

TRANSIT

► *Philadelphia Transit Company.*—Invited bids for 270 new cars to be used on Market st.-Frankford subway-elevated line; invitations to bid were sent to St. Louis Car, Pullman-Standard, American Car & Foundry and Budd Company.

LOCOMOTIVES

► *847 New Units Installed in First Seven Months.*—Class I railroads installed 847 new locomotive units (843 diesel-electrics and four electrics), in this year's first seven months, compared with 905 units (all diesel-electrics), in comparable 1956 period, AAR reports; new locomotive units on order August 1 totaled 395 (365 diesel-electrics and 30 gas turbine-electrics), compared with 849 (822 diesel-electrics, 15 gas turbine-electrics and 12 electrics) on order August 1, 1956.

FREIGHT-TRAIN CARS

► *Canadian National.*—Ordered two depressed-center flat cars to weigh 98 tons each when loaded—largest units ever for use on CNR lines in Newfoundland—from Canadian Car Co. for delivery early next year.

► *July Deliveries Up from 1956.*—New freight cars delivered last month totaled 7,725, an increase of 2,381 over same month in 1956; total was down from 8,377 cars delivered in June 1957, ARCI and AAR report. Car orders for July came to 1,251 compared to 2,642 in July last year and 4,918 in June 1957. Backlog of cars on order and undelivered August 1 was 85,229 cars compared with 91,810 on July 1.

Type	Ordered July '57	Delivered July '57	On Order Aug. 1, '57
Box—Plain	0	2,703	22,597
Box—Auto	0	0	500
Flat	110	110	2,944
Gondola	510	574	14,050
Hopper	0	2,192	29,588
Covered Hopper	90	875	5,951
Refrigerator	0	595	2,698
Tank	538	623	5,930
Caboose	1	6	139
Other	2	47	832
TOTAL	1,251	7,725	85,229
Car Builders	835	4,664	38,604
Company Shops	416	3,061	46,625

New Facilities

► *New York Central.*—Constructed fabricated steel shed to put all rip track operations at Buffalo Frontier Yard under one 18,000 sq ft roof; capacity is rated at 20-30 cars per shift on five illuminated tracks using assembly line techniques.

Write for free literature: Sandwich Walls of Alcoa Aluminum.

MEMBER

IT'S BIG DRAFT GEAR NEWS:

Cardwell Westinghouse has developed a FRICTION draft gear that packs over FORTY THOUSAND FOOT-POUNDS of capacity* with a reaction or sill pressure well under 500,000 pounds.

Fits standard 24⅝ inch pockets.

Has 3¼ inches of travel.

It's the NEW...

*Official A.A.R. Capacity: 42,420 Foot-Pounds

WESTINGHOUSE

MARK 40

FRICTION DRAFT GEAR

A. A. R. CERTIFICATE NO. 35

Over forty thousand foot-pounds of impact-absorbing capacity are packed into this amazing new friction draft gear. It's the new *Mark 40,* positive answer to today's heavier railroading requirements; highest capacity friction draft gear ever offered for standard pockets!

There's *high absorption* and *low reaction,* characteristic of the friction principle, very necessary for the reduction of damage claims and car maintenance.

Cardwell Westinghouse Company
332 S. Michigan Ave., Chicago 4, Illinois
Canadian Cardwell Co., Ltd., Montreal

Specify CARDWELL WESTINGHOUSE

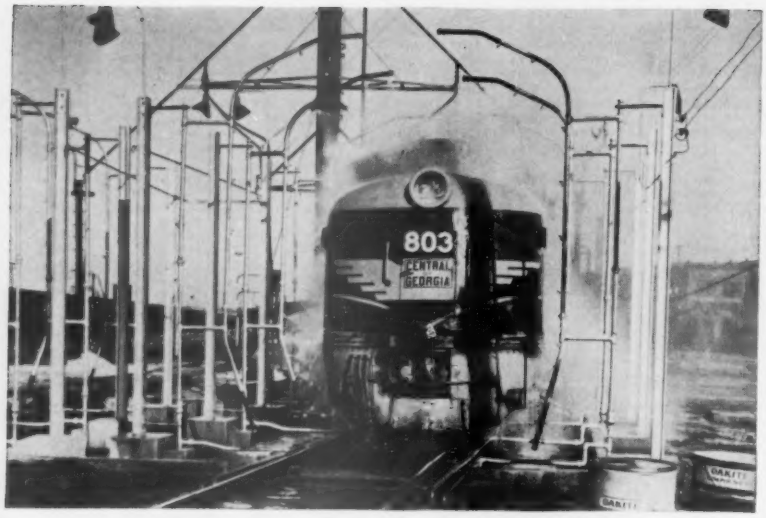
Freight Operating Statistics of Large Railways—Selected Items

Region, Road and Year		Miles of road operated	Train-miles	Locomotive-Miles: Principal and helper	Locomotive-Miles: Light	Car-Miles: Loaded (*thousands*)	Car-Miles: Per cent loaded	Ton-miles (*thousands*): Gross excl.locos & tenders	Ton-miles (*thousands*): Net rev. and non-rev.	Road-locos. on line: Serviceable: Unstored	Road-locos. on line: Serviceable: Stored	Road-locos. on line: B.O.	Road-locos. on line: Per cent B.O.
New Eng. Region	Boston & Maine	1957	1,560	232,466	236,244	8,383	9,179	64.0	615,387	247,078	79	..	3	3.7
		1956	1,562	258,362	263,711	10,310	10,074	66.6	661,257	272,009	71	..	..	..
	N. Y., N. H. & Htfd	1957	1,739	276,007	276,007	17,531	11,629	64.3	769,240	314,466	85	..	13	13.3
		1956	1,746	288,433	288,508	21,454	12,455	66.8	791,189	327,247	83	..	16	16.2
Great Lakes Region	Delaware & Hudson	1957	771	171,636	176,442	6,195	9,212	67.4	651,991	336,493	38	..	2	5.0
		1956	792	191,808	196,944	6,176	10,076	70.7	692,405	362,171	36	1	4	9.8
	Del., Lack. & Western	1957	927	243,422	249,618	22,853	12,092	69.2	784,484	339,026	63	..	1	1.6
		1956	962	316,300	329,588	27,300	13,464	67.2	902,472	398,761	63	..	..	..
	Erie	1957	2,207	597,720	605,826	14,548	32,795	66.8	2,095,664	836,430	169	..	2	1.2
		1956	2,225	609,671	616,125	18,168	33,807	68.1	2,127,018	861,269	163	..	2	1.2
	Grand Trunk Western	1957	951	239,538	248,411	1,876	8,030	60.1	565,013	215,371	58	11	17	19.8
		1956	951	303,304	308,886	2,375	9,290	58.2	682,568	274,726	57	..	18	24.0
	Lehigh Valley	1957	1,134	223,332	226,261	4,268	9,919	66.2	679,550	312,865	31	..	3	8.8
		1956	1,137	243,848	248,020	8,726	10,988	64.2	786,124	368,532	34	..	1	2.9
	New York Central	1957	10,570	2,248,609	2,276,790	115,706	98,484	58.7	7,206,082	3,137,285	484	7	22	4.3
		1956	10,565	2,594,105	2,630,908	132,651	102,756	60.2	7,561,478	3,404,480	547	1	84	13.3
	New York, Chic. & St. L	1957	2,155	713,546	728,819	5,314	30,320	63.8	2,153,120	945,882	178	7	21	10.2
		1956	2,154	780,476	800,935	8,551	32,784	64.4	2,349,880	1,066,125	172	..	26	13.1
	Pitts. & Lake Erie	1957	221	66,857	66,857	....	2,960	67.8	257,617	161,536	15	..	..	..
		1956	221	74,712	74,712	....	3,314	69.4	283,249	178,631	15	..	..	..
	Wabash	1957	2,379	521,620	522,131	6,396	23,227	64.6	1,558,184	612,512	109	..	3	2.7
		1956	2,381	519,128	522,453	6,223	23,536	64.7	1,577,020	616,889	109	..	3	2.7
Central Eastern Region	Baltimore & Ohio	1957	5,897	1,616,624	1,809,993	152,183	67,274	61.1	5,482,669	2,686,755	467	4	99	17.4
		1956	5,910	1,762,698	1,984,080	189,473	69,516	62.4	5,896,086	2,960,687	446	..	71	13.7
	Bessemer & Lake Erie	1957	208	69,130	75,009	320	3,696	60.7	445,357	291,593	16	..	..	..
		1956	208	69,939	75,309	216	3,797	58.4	449,479	285,192	17	..	..	..
	Central RR Co. of New Jersey	1957	612	126,184	127,708	6,975	4,770	64.1	361,320	186,544	59	..	6	9.2
		1956	612	131,211	132,375	6,769	5,097	66.4	381,528	201,432	64	1	5	7.1
	Chicago & Eastern Ill	1957	862	121,028	121,028	3,603	5,697	66.7	410,274	201,976	28	..	2	6.7
		1956	868	125,797	125,797	2,556	5,559	68.1	403,790	195,343	28	..	2	6.7
	Elgin, Joliet & Eastern	1957	236	90,024	90,992	....	2,743	61.8	225,566	128,574	42	..	1	2.3
		1956	236	96,267	97,612	....	3,051	63.5	250,840	137,159	38	..	2	5.0
	Pennsylvania System	1957	9,902	3,065,810	3,278,482	243,459	129,726	63.7	9,733,813	4,652,171	816	31	198	18.9
		1956	9,892	3,246,547	3,483,293	270,891	141,962	65.0	10,599,973	5,171,599	865	..	343	28.4
	Reading	1957	1,303	358,725	361,088	13,676	13,419	61.1	1,120,747	592,976	160	21	17	8.6
		1956	1,303	372,803	374,838	11,534	14,814	64.7	1,209,293	662,297	162	6	24	12.5
	Western Maryland	1957	846	174,545	179,849	9,026	6,968	62.6	603,607	343,965	47	..	..	..
		1956	846	179,777	186,941	10,849	7,233	62.6	617,547	350,228	38	..	..	..
Pocahontas Region	Chesapeake & Ohio	1957	5,067	1,609,034	1,615,261	32,215	74,648	55.6	6,812,086	3,824,368	570	8	74	11.3
		1956	5,067	1,645,991	1,667,674	47,911	71,399	57.1	6,312,807	3,547,378	476	9	65	11.8
	Norfolk & Western	1957	2,110	814,784	872,300	66,551	41,619	56.1	4,049,024	2,241,062	200	13	10	4.5
		1956	2,103	799,185	846,739	60,055	38,927	58.7	3,688,229	2,049,971	225	4	17	6.9
Southern Region	Atlantic Coast Line	1957	5,283	829,614	829,638	10,520	26,743	58.2	2,009,640	887,283	134	..	4	2.9
		1956	5,278	958,734	958,734	10,926	29,737	60.3	2,156,413	948,866	200	..	11	5.2
	Central of Georgia	1957	1,730	192,412	192,412	1,953	8,169	66.5	591,619	291,071	35	..	1	2.8
		1956	1,731	224,004	224,004	2,273	8,739	69.0	604,733	295,295	34	..	1	2.9
	Gulf, Mobile & Ohio	1957	2,717	278,180	278,180	115	15,640	69.0	1,074,510	521,925	87	..	4	4.4
		1956	2,717	281,069	281,069	466	15,541	69.9	1,039,865	500,919	83	..	8	8.8
	Illinois Central	1957	6,503	1,146,627	1,146,627	31,719	48,599	61.2	3,579,693	1,642,322	254	71	57	14.9
		1956	6,532	1,240,639	1,242,579	36,207	50,781	61.6	3,774,325	1,756,957	330	6	122	26.6
	Louisville & Nashville	1957	4,702	910,513	912,838	15,263	33,873	59.9	2,674,329	1,336,247	138	..	6	4.2
		1956	4,714	949,995	956,071	17,664	35,729	62.8	2,715,964	1,369,179	180	16	27	12.1
	Nash., Chatt. & St. Louis	1957	1,043	163,874	167,099	3,298	5,327	68.3	360,954	172,106	44	..	2	4.3
		1956	1,043	172,808	177,062	4,285	5,738	73.5	369,548	180,029	51	..	2	3.8
	Seaboard Air Line	1957	4,051	726,299	726,299	2,786	26,033	59.7	1,955,234	850,067	157	..	5	3.1
		1956	4,051	710,781	710,781	3,728	27,705	61.3	2,023,364	883,978	145	..	8	5.2
	Southern	1957	6,251	871,884	871,944	9,400	40,388	65.4	2,745,648	1,275,000	191	12	13	6.0
		1956	6,259	917,438	917,498	12,674	42,968	67.9	2,820,944	1,312,971	285	..	3	1.0
Northwestern Region	Chicago & North Western (*)	1957	9,252	894,649	894,675	9,273	30,593	62.0	2,317,282	917,790	185	2	11	5.6
		1956	9,344	905,027	906,656	12,375	36,026	63.7	2,619,809	1,098,880	178	15	60	23.7
	Chicago Great Western	1957	1,437	136,437	136,437	221	7,039	68.7	484,545	228,116	30	..	2	6.3
		1956	1,437	137,759	137,759	215	8,395	68.7	575,087	270,228	31	..	2	6.1
	Chic., Milw., St. P. & Pac	1957	10,607	931,285	945,983	18,829	42,248	64.8	2,927,420	1,323,199	285	..	14	4.7
		1956	10,633	971,407	986,759	19,218	44,322	66.0	3,041,017	1,386,238	287	7	9	3.0
	Duluth, Missabe & Iron Range	1957	565	165,200	165,576	939	8,284	50.8	877,738	532,783	66	10	7	8.4
		1956	569	159,993	160,680	1,573	7,961	51.0	824,098	496,359	69	4	3	3.9
	Great Northern	1957	8,272	1,120,820	1,125,159	25,345	46,705	66.3	3,528,357	1,786,600	230	77	7	2.2
		1956	8,272	1,194,292	1,201,915	34,282	49,708	66.1	3,736,293	1,890,387	277	41	16	4.8
	Minneap., St. P. & S. Ste. M	1957	4,169	426,080	428,086	2,463	13,662	63.6	1,044,340	517,207	84	8	5	5.2
		1956	4,171	435,286	437,954	2,668	15,147	63.6	1,068,981	500,684	83	10	3	3.1
	Northern Pacific	1957	6,534	796,351	802,984	16,503	35,492	69.1	2,410,064	1,123,624	240	53	22	7.0
		1956	6,569	849,234	862,897	22,716	36,352	68.2	2,469,694	1,137,049	215	71	47	14.1
	Spokane, Portland & Seattle	1957	944	137,911	137,911	1,299	5,974	75.4	392,922	191,473	54	..	2	3.6
		1956	946	150,491	150,491	1,368	6,604	78.1	455,399	241,252	51	11	3	4.6
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1957	13,172	2,561,058	2,691,853	55,039	121,664	61.7	8,579,541	3,141,775	578	35	73	10.6
		1956	13,124	2,524,445	2,649,112	80,870	115,280	63.4	7,980,628	3,021,028	570	45	54	8.1
	Chic., Burl. & Quincy	1957	8,750	1,020,371	1,014,882	24,195	45,748	66.9	3,075,976	1,360,444	145	46	34	15.1
		1956	8,771	1,045,319	1,039,758	26,986	47,630	69.4	3,117,924	1,392,599	194	50	40	14.1
	Chic., Rock I. & Pac	1957	7,576	967,906	966,162	1,812	38,158	61.2	2,806,431	1,181,819	179	..	7	3.8
		1956	7,580	950,427	946,360	1,372	37,172	61.6	2,702,891	1,132,833	174	..	1	.6
	Denver & R. G. Wn	1957	2,155	306,336	328,357	32,169	15,414	72.4	1,065,527	527,092	77	6	5	5.7
		1956	2,155	308,969	333,714	34,178	15,352	69.6	1,060,652	509,950	72	9	13	13.8
	Southern Pacific	1957	8,036	2,168,643	2,245,114	117,330	103,676	64.8	7,161,744	2,904,290	682	122	32	3.8
		1956	8,055	2,333,015	2,436,735	161,166	105,625	63.5	7,415,387	2,997,148	675	113	59	7.0
	Union Pacific	1957	9,786	2,103,994	2,156,625	87,176	102,014	65.6	6,926,453	2,951,151	372	101	62	11.6
		1956	9,804	2,254,602	2,309,286	90,109	105,868	65.0	7,180,183	3,005,879	367	147	101	16.4
	Western Pacific	1957	1,190	232,387	248,734	14,025	10,891	71.5	739,063	343,666	46	..	..	..
		1956	1,190	245,190	263,599	16,091	11,174	68.1	757,552	338,731	45	..	..	..
Southwestern Region	Kansas City Southern	1957	886	129,980	129,985	321	7,713	65.6	561,072	251,860	25	..	1	3.8
		1956	886	152,327	152,350	126	8,970	69.2	639,660	298,467	25	..	2	7.4
	Louisiana & Arkansas	1957	746	82,414	82,414	65	4,050	63.4	318,924	150,055	20	..	..	..
		1956	746	100,311	100,311	....	4,407	65.3	335,368	156,552	18	..	..	..
	Mo.-Kans.-Texas Lines	1957	3,172	265,867	265,867	2,742	12,572	65.0	839,436	310,888	66	..	6	8.3
		1956	3,230	341,257	341,257	3,832	14,500	65.6	968,589	432,076	86	..	1	1.1
	Missouri Pacific	1957	9,662	1,205,367	1,205,367	9,584	56,195	64.2	3,970,555	1,764,431	392	..	13	3.2
		1956	9,709	1,357,691	1,357,691	10,969	59,430	63.8	4,154,514	1,816,573	358	..	31	8.0
	Texas & Pacific	1957	1,822	292,408	292,408	6,302	13,627	61.6	1,006,602	381,746	45	..	1	2.2
		1956	1,822	313,831	313,831	3,357	14,631	63.6	1,068,063	427,093	60	..	1	1.6
	St. Louis-San Francisco	1957	4,573	592,798	592,798	5,680	24,489	67.9	1,649,144	766,323	98	..	6	5.8
		1956	4,573	619,025	619,025	5,912	24,604	68.2	1,652,550	741,836	106	..	6	5.4
	St. Louis Southw. Lines	1957	1,554	357,705	357,717	1,704	16,293	67.4	1,083,318	484,258	54	..	1	1.8
		1956	1,554	341,383	341,407	1,614	15,493	69.7	987,463	441,410	55	..	1	1.8
	Texas & New Orleans	1957	4,285	647,915	647,915	671	28,135	64.6	1,979,388	882,837	144	..	..	..
		1956	4,302	705,944	705,944	838	29,054	64.5	2,028,730	893,770	142	..	2	1.4

For the Month of May 1957 Compared with May 1956

Region, Road and Year		Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos and tenders	G.t.m.per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car-miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine 1957	1,925	8,067	9,992	1.6	40,606	2,654	1,066	26.9	794	46.1	5,109	15.3	110.1
	1956	1,490	8,624	10,114	1.9	39,945	2,566	1,055	27.0	876	48.7	5,617	15.6	144.5
	N. Y., N. H. & Htfd 1957	3,289	14,028	17,317	2.3	43,884	2,787	1,139	27.0	597	34.3	5,833	15.7	116.7
	1956	2,066	16,357	18,423	3.1	43,246	2,743	1,135	26.3	538	30.6	6,046	15.8	128.9
Great Lakes Region	Delaware & Hudson 1957	2,204	5,558	7,762	5.6	65,593	3,817	1,970	36.5	1,350	54.8	14,079	17.3	159.7
	1956	1,448	6,073	7,521	4.0	63,401	3,628	1,898	35.9	1,509	59.4	14,751	17.6	170.8
	Del., Lack. & Western 1957	6,302	10,660	16,962	3.3	54,790	3,292	1,423	28.0	683	35.2	11,798	17.0	152.1
	1956	3,322	12,098	15,420	3.0	50,409	2,902	1,282	29.6	819	41.1	13,371	17.7	205.0
	Erie 1957	8,119	19,536	27,655	2.4	71,052	3,535	1,411	25.5	1,026	60.2	12,225	20.3	130.4
	1956	4,954	20,698	25,652	2.8	66,833	3,526	1,428	25.5	1,024	59.1	12,487	19.2	137.5
	Grand Trunk Western 1957	4,960	7,596	12,556	6.8	51,869	2,374	905	26.8	553	34.3	7,305	22.0	101.3
	1956	4,109	8,903	13,012	8.2	49,815	2,273	915	29.6	650	37.8	9,319	22.1	145.5
	Lehigh Valley 1957	4,327	9,920	14,247	4.6	67,182	3,090	1,423	31.5	708	33.9	8,900	22.1	241.5
	1956	7,472	8,466	15,938	4.5	67,793	3,292	1,543	33.5	741	34.4	10,456	21.0	256.3
	New York Central 1957	57,136	84,517	141,653	3.1	53,446	3,247	1,414	31.9	722	38.6	9,575	16.7	166.8
	1956	47,927	95,542	143,469	3.9	50,228	2,969	1,337	33.1	759	38.0	10,395	17.2	157.4
	New York, Chic. & St. L 1957	8,797	16,213	25,010	8.8	54,137	3,069	1,348	31.2	1,203	60.5	14,159	17.9	128.5
	1956	6,245	19,749	25,994	5.2	52,302	3,079	1,397	32.5	1,342	64.0	15,966	17.4	145.4
	Pitts. & Lake Erie 1957	3,952	9,189	13,141	8.1	60,473	3,860	2,420	54.6	396	10.7	23,578	15.7	157.7
	1956	2,568	10,074	12,642	4.3	58,729	3,831	2,416	53.9	469	12.5	26,074	15.5	175.2
	Wabash 1957	9,388	9,994	19,382	4.6	65,027	2,996	1,178	26.4	1,021	59.9	8,305	21.8	159.9
	1956	8,890	9,898	18,788	4.7	66,530	3,053	1,194	26.2	1,052	62.0	8,358	21.9	162.7
Central Eastern Region	Baltimore & Ohio 1957	48,322	53,831	102,153	4.0	51,953	3,436	1,684	39.9	864	35.4	14,697	15.3	117.2
	1956	46,148	54,402	100,550	4.5	50,328	3,406	1,710	42.6	965	36.3	16,160	15.0	141.6
	Bessemer & Lake Erie 1957	3,962	1,136	5,098	8.1	116,251	6,607	4,326	78.9	1,674	34.9	45,222	18.0	166.4
	1956	4,346	1,223	5,569	7.3	102,410	6,672	4,233	75.1	1,653	37.7	44,230	15.9	162.7
	Central RR Co. of New Jersey 1957	2,341	9,540	11,881	7.2	43,569	2,955	1,525	39.1	502	20.0	9,833	15.2	92.0
	1956	2,161	11,112	13,273	6.6	41,876	3,015	1,592	39.5	476	18.1	10,617	14.4	90.0
	Chicago & Eastern Ill 1957	2,821	3,320	6,141	8.0	63,324	3,406	1,677	35.5	1,080	45.7	7,558	18.7	137.5
	1956	2,391	2,824	5,215	8.1	57,933	3,216	1,556	35.1	1,126	47.1	7,260	18.0	144.3
	Elgin, Joliet & Eastern 1957	7,742	9,829	17,571	6.0	21,389	2,626	1,497	46.9	233	8.1	17,574	8.5	86.1
	1956	6,505	10,639	17,144	5.2	21,120	2,744	1,501	45.0	260	9.1	18,748	8.1	101.7
	Pennsylvania System 1957	96,980	95,014	191,994	8.2	54,862	3,266	1,561	35.9	782	34.2	15,156	17.3	118.5
	1956	99,101	96,233	195,334	5.5	54,541	3,364	1,641	36.4	863	36.4	16,865	16.7	110.4
	Reading 1957	12,475	21,120	33,595	2.9	51,248	3,124	1,653	44.2	585	21.7	14,680	16.4	70.9
	1956	8,707	21,899	30,606	3.6	49,563	3,244	1,777	44.7	666	23.0	16,396	15.3	77.6
	Western Maryland 1957	4,777	3,592	8,369	2.5	51,062	3,544	2,019	49.4	1,280	41.5	13,115	14.8	142.2
	1956	4,064	4,541	8,605	3.1	49,420	3,493	1,981	48.4	1,297	42.8	13,354	14.4	184.2
Pocahontas Region	Chesapeake & Ohio 1957	57,893	33,038	90,931	.6	80,938	4,259	2,391	51.2	1,363	47 8	24,347	19.1	87.5
	1956	48,447	35,277	83,724	1.2	72,404	3,859	2,168	49.7	1,369	48.2	22,584	18.9	101.2
	Norfolk & Western 1957	38,809	10,877	49,686	1.4	88,752	5,094	2,820	53.8	1,473	48.7	34,262	17.9	147.4
	1956	32,176	10,060	42,236	1.3	79,813	4,766	2,649	52.7	1,581	51.2	31,445	17.3	127.5
Southern Region	Atlantic Coast Line 1957	20,848	16,563	37,411	4.4	45,111	2,435	1,075	33.2	764	39.6	5,418	18.6	223.4
	1956	16,979	18,114	35,093	4.5	43,234	2,265	997	31.9	864	45.0	5,799	19.2	160.4
	Central of Georgia 1957	2,389	6,399	8,788	3.9	52,439	3,080	1,515	35.6	1,093	46.1	5,427	17.1	192.1
	1956	2,135	7,362	9,497	3.9	47,598	2,709	1,323	33.8	1,030	44.2	5,503	17.6	228.7
	Gulf, Mobile & Ohio 1957	5,807	9,983	15,790	7.1	75,209	3,865	1,877	33.4	1,076	46.7	6,197	19.5	107.0
	1956	4,246	10,733	14,979	5.5	71,993	3,705	1,785	32.2	1,076	47.7	5,947	19.5	108.1
	Illinois Central 1957	27,657	24,094	51,751	2.4	55,518	3,152	1,446	33.8	1,039	50.2	8,147	17.8	106.8
	1956	22,471	27,463	49,934	1.9	52,213	3,085	1,436	34.6	1,130	53.0	8,677	17.2	98.0
	Louisville & Nashville 1957	20,019	16,211	46,230	4.8	52,108	2,945	1,471	39.4	974	41.2	9,167	17.7	224.6
	1956	26,876	15,802	42,678	3.8	50,096	2,866	1,445	38.3	1,037	43.1	9,369	17.5	153.1
	Nash., Chatt. & St. Louis 1957	2,483	4,894	7,377	6.1	42,792	2,206	1,052	32.3	750	34.0	5,323	19.4	136.3
	1956	3,381	3,892	7,273	3.8	40,199	2,142	1,043	31.4	779	33.8	5,568	18.8	122.8
	Seaboard Air Line 1957	12,791	14,743	27,534	2.6	52,585	2,749	1,195	32.7	955	49.0	6,769	19.5	170.9
	1956	10,683	17,225	27,908	2.3	52,223	2,911	1,272	31.9	1,033	52.8	7,039	18.3	180.9
	Southern 1957	16,442	24,887	41,329	4.7	53,392	3,160	1,467	31.6	1,004	48.6	6,580	17.0	149.3
	1956	15,827	25,375	41,202	2.7	53,065	3,085	1,436	30.6	1,006	48.5	6,767	17.3	115.5
Northwestern Region	Chicago & North Western (*) 1957	22,002	24,891	46,893	6.0	47,132	2,617	1,037	30.0	592	31.8	3,200	18.2	156.8
	1956	18,347	36,840	55,187	4.5	50,009	2,931	1,230	30.5	645	33.2	3,794	17.3	129.3
	Chicago Great Western 1957	1,960	4,043	6,003	3.2	67,270	3,557	1,675	32.4	1,192	53.6	5,121	18.9	143.5
	1956	1,394	3,971	5,365	2.9	79,148	4,177	1,963	32.2	1,563	70.6	6,066	19.0	141.4
	Chic., Milw., St. P. & Pac 1957	32,221	26,820	59,041	6.0	61,192	3,153	1,425	31.3	714	35.2	4,024	19.5	114.3
	1956	27,972	33,255	61,227	6.5	59,643	3,138	1,431	31.3	741	35.9	4,206	19.1	117.7
	Duluth, Missabe & Iron Range 1957	14,035	902	14,937	2.1	102,205	5,583	3,389	64.3	1,157	35.4	30,419	19.2	76.1
	1956	13,996	844	14,840	1.6	89,879	5,444	3,279	62.3	1,075	33.8	28,140	17.4	80.7
	Great Northern 1957	24,725	19,058	43,783	3.3	58,922	3,201	1,621	38.3	1,299	51.2	6,967	18.7	125.1
	1956	20,598	22,934	43,532	3.1	57,629	3,178	1,608	38.0	1,423	56.6	7,372	18.4	122.9
	Minneap., St. P. & S. Ste. M 1957	6,833	8,460	15,293	5.3	51,918	2,459	1,218	37.9	1,135	47.2	4,002	21.2	162.8
	1956	6,158	9,067	15,225	5.1	51,214	2,503	1,173	33.1	1,068	50.8	3,872	20.9	158.5
	Northern Pacific 1957	20,635	15,213	35,848	4.0	61,317	3,035	1,415	31.7	976	44.6	5,547	20.3	89.9
	1956	17,731	17,623	35,354	6.2	57,165	2,924	1,346	31.3	1,044	48.9	5,584	19.7	90.9
	Spokane, Portland & Seattle 1957	1,327	3,919	5,246	2.0	42,078	2,892	1,409	32.1	1,068	44.2	6,543	14.8	94.8
	1956	1,195	3,846	5,041	3.8	45,622	3,045	1,613	36.5	1,475	51.7	8,227	15.1	86.1
Central Western Region	Atch., Top. & S. Fe (incl. 1957	60,575	36,906	97,481	6.2	78,060	3,358	1,230	25.8	1,041	65.3	7,694	23.3	138.0
	G. C. & S. F. and P. & S. F.) 1956	55,467	37,660	93,127	3.5	73,573	3,170	1,200	26.2	1,087	65.4	7,426	23.3	143.5
	Chic., Burl. & Quincy 1957	20,503	21,067	41,570	3.7	65,192	3,025	1,338	29.7	1,055	53.1	5,015	21.6	158.1
	1956	18,384	22,734	41,118	4.0	63,018	2,990	1,335	29.2	1,096	54.0	5,122	21.1	128.5
	Chic., Rock I. & Pac 1957	14,302	22,959	37,261	5.5	59,037	2,910	1,225	31.0	1,042	55.0	5,032	20.4	181.6
	1956	12,191	21,776	33,967	5.2	58,124	2,849	1,194	30.5	1,118	59.6	4,821	20.4	182.7
	Denver & R. G. Wn 1957	6,705	5,266	11,971	2.9	66,842	3,489	1,726	34.2	1,362	55.0	7,890	19.2	139.5
	1956	7,510	5,880	13,390	3.1	65,765	3,443	1,655	33.2	1,228	53.1	7,633	19.2	130.8
	Southern Pacific 1957	31,021	45,283	76,304	1.9	67,841	3,343	1,356	28.0	1,263	69.6	11,658	20.5	99.5
	1956	30,408	50,158	80,566	2.0	62,381	3,215	1,300	28.4	1,217	67.6	12,003	19.6	108.2
	Union Pacific 1957	33,381	30,293	63,674	1.7	86,018	3,313	1,411	28.9	1,490	78.4	9,728	26.1	137.7
	1956	30,647	30,287	60,934	1.7	82,072	3,207	1,343	28.4	1,574	85.3	9,890	25.8	128.3
	Western Pacific 1957	2,611	3,073	5,684	2.2	76,539	3,195	1,486	31.6	1,951	86.5	9,316	24.1	194.5
	1956	2,117	4,705	6,822	2.0	77,962	3,106	1,389	30.3	1,643	79.6	9,182	25.2	203.3
Southwestern Region	Kansas City Southern 1957	2,065	5,244	7,309	3.4	86,292	4,336	1,946	32.7	1,110	51.8	9,170	20.0	183.6
	1956	1,268	5,998	7,266	2.5	85,976	4,218	1,968	33.3	1,285	55.8	10,867	20.5	216.9
	Louisiana & Arkansas 1957	1,812	3,401	5,213	5.9	74,515	3,884	1,828	37.1	934	39.8	6,489	19.3	173.0
	1956	1,541	3,404	4,945	6.0	64,918	3,347	1,562	35.5	988	42.6	6,770	19.4	219.3
	Mo.-Kans.-Texas Lines 1957	5,073	6,081	11,154	6.9	57,920	3,173	1,175	24.7	914	56.9	3,162	18.3	122.5
	1956	4,291	7,275	11,566	5.8	61,129	2,842	1,268	29.8	1,240	63.4	4,315	21.5	135.4
	Missouri Pacific 1957	22,008	25,568	47,576	3.8	67,502	3,304	1,468	31.4	1,190	59.1	5,891	20.5	106.5
	1956	23,145	31,212	54,357	4.6	63,700	3,084	1,349	30.6	1,102	56.5	6,036	20.8	125.8
	Texas & Pacific 1957	3,155	6,489	9,644	2.9	74,724	3,453	1,310	28.0	1,278	74.1	6,759	21.7	224.9
	1956	2,308	6,567	8,875	2.6	75,530	3,418	1,367	29.2	1,538	82.9	7,562	22.2	180.5
	St. Louis-San Francisco 1957	13,126	11,416	24,542	1.7	57,082	2,793	1,298	31.3	1,014	47.7	5,406	20.5	207.3
	1956	12,487	11,759	24,246	3.0	54,312	2,682	1,204	30.2	1,032	50.2	5,233	20.3	207.0
	St. Louis Southw. Lines 1957	2,010	4,844	6,854	2.7	66,012	3,035	1,357	29.7	2,361	117.9	10,052	21.8	223.5
	1956	1,778	4,637	6,415	2.0	58,823	2,900	1,296	28.5	2,165	109.1	9,163	20.3	210.7
	Texas & New Orleans 1957	5,598	16,141	21,739	1.4	61,702	3,073	1,371	31.4	1,312	64.8	6,646	20.2	158.3
	1956	5,109	16,369	21,478	1.9	59,899	2,892	1,274	30.8	1,308	65.9	6,702	20.8	175.5

* Includes operations of Chicago, St. Paul, Minneapolis & Omaha Ry. Co., under lease, effective Jan. 1, 1957.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to Revision.



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People in the News

Roy P. Cosper
Cotton Belt

S. McMahon
CPE

CANADIAN PACIFIC EXPRESS.—**S. McMahon,** vice-president and general manager, Toronto, Ont., elected president, succeeding the late **J. E. Coulter.** Mr. McMahon will continue also as general manager.

COTTON BELT.—**Roy P. Cosper,** assistant to general counsel, Tyler, Tex., appointed general solicitor there, effective September 1, succeeding **Clyde W. Fiddes,** promoted (Railway Age, August 19, p. 48). **Phillip A. Staskus** promoted to general attorney.

INDIANA HARBOR BELT-CHICAGO JUNCTION.—**Louis T. Schmidt,** superintendent, IHB, appointed assistant to the vice-president and general manager, IHB and CJ, with headquarters as before at Gibson (Hammond), Ind., and is succeeded by **W. J. Barry,** superintendent, CJ and Chicago River & Indiana. **J. E. Timberlake,** who has been assigned to special administrative duties, succeeds Mr. Barry. **Dan Barrett,** trainmaster, IHB, Blue Island, Ill., named assistant superintendent there. The following trainmasters assigned to various points between the IHB's Gibson and Norpaul (Franklin Park), Ill. yards: **J. E. Cole, F. E. Detzner, G. L. Armstrong, D. H. Watts, E. P. Fike, J. E. Caldwell,** and **H. W. Collins.** The following appointed to the newly created positions of terminal trainmasters: **M. P. Krizmanic, W. F. Harbert** and **E. C. Hofbauer,** Gibson, and **Walter Bella, S. P. Cundary** and **J. R. Dascenzi,** Blue Island. **C. P. Crilly** named trainmaster, CJ and CR&I, Unian Stock Yards, Chicago, and **G. A. Zeider** appointed safety supervisor, Gibson.

NICKEL PLATE.—**S. G. Raber,** signal engineer, Cleveland, retired August 16.

NORTHWESTERN UNIVERSITY.—**Aaron J. Gellman** appointed to the research staff of the Transportation Center at Northwestern. Mr. Gellman was formerly a staff officer at the U. S. Army Transportation Research and Development Command and has been a guest lecturer in transportation at the U. S. Army Logistics Management Center.

SEABOARD.—**James M. McDonough, Jr.,** assistant general counsel, Norfolk, Va., resigns September 1, to engage in general practice of law as a member of Thompson, McDonough & Moran, Tampa, Fla.

OBITUARY

Clarence C. Cornells, superintendent of shops, **Burlington,** Aurora, Ill., died August 14 in St. Charles Hospital, Aurora.

J. E. Coulter, 67, president, **Canadian Pacific Express,** Toronto, Ont., died August 3 in that city.

Harry M. Griffiths, 76, vice-president, **Genesee & Wyoming,** Scranton, Pa., died August 7 in that city.

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Railroads' Merits Need Selling

There are no sins of the railroads, present or past, with which most people are not fully familiar. They are less aware of the industry's virtues.

Perhaps the most noteworthy of these virtues is the fact that the industry is a genuine **common carrier**—that is, it serves all traffic alike, not turning away from that which is undesirable.

Meantime, the public gets told that "everything you get you get by truck" and that 47,000 communities (or some such number) are served exclusively by truck, having no rail service. But by whose trucks?—certainly the for-hire highway carriers aren't concentrating on serving little shippers and remote villages.

A businessman who puts his merchandise in an attractive package and advertises its merits —perhaps too enthusiastically—is certainly not to be condemned for his enterprise. And the truck people are no more to blame for making themselves as attractive as they can, than a young woman is for care in her facial make-up.

There is as much skill available to the railroads for this purpose, as there is to the highway haulers—and the railroads have a much better story to tell. But, for some reason not easy to discern, the position of the railroads as true common carriers—*the only true common carriers* —has never been adequately or dramatically or repeatedly drawn to the attention of the public.

It should be, though. Because—if the public had a full realization of its continuing and undiminished dependence on railroads to serve "little fellow" shippers and communities (traffic and people that other carriers usually manage to avoid)—then the desire of many railroads to get into other kinds of transportation would arouse more enthusiasm than it has done, so far.

•

It should not be difficult to collect evidence on the completeness of railroad service—to all communities and customers en route—in comparison to the highly selective service of parallel highway and water carriers.

The truck people take a lot more pains with their "semantics"—choice of terms—than the railroads have so far done. Remember the word they used in their campaign against state limitation of size and weight of vehicles? "Balkanizing America" they called it. And their "law of the jungle" attack on the Weeks report.

Railroad choice of terminology has usually not been so happy. When railroads want to engage in other forms of transportation, they often call it "integration"—a term not only likely to be misunderstood, but misunderstood to the railroads' disadvantage. We have called much projected expansion of railroad service "department store transportation"—which certainly isn't an ideal label, but it's nearer to the facts and easier to understand and approve than "integration" is ever likely to be.

Then there are such terms as the "long-and-short-haul clause" and the "commodity clause" —both of them hair-shirts for the railroads. If these outdated restrictions were given labels conveying the degree of opprobrium they deserve, they would soon be on their way out.

TALENT AVAILABLE: This paper has never wavered in its faith in the ability of railroad public relations people. If these men were given the clear assignment to select the railroads' most "salable" merits, and were provided with adequate means to inform the public and arouse popular enthusiasm for these merits—they could undoubtedly do the job. If merit alone were the determinant of public policy, the public would be clamoring for railroad provision of "department store transportation." But merit, unaccompanied by skilled interpretation, often goes unrewarded.

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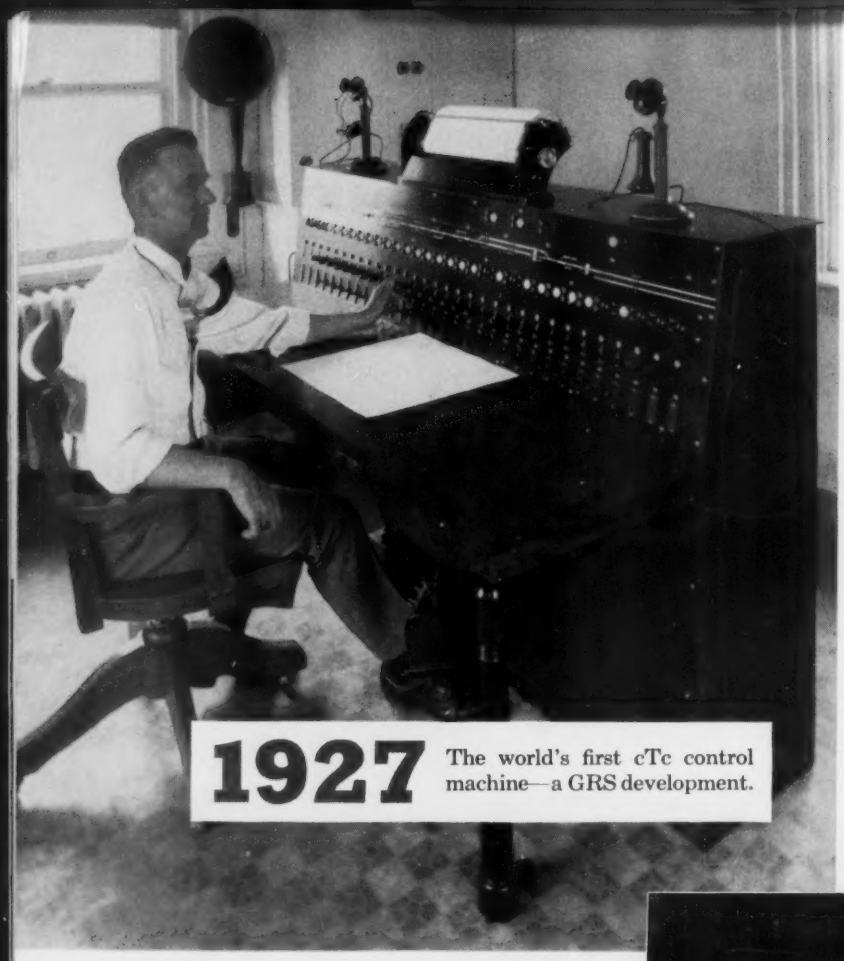

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